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GenCore version 5.1.6

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OM protein - protein search, using sw model

Run on: April 6, 2005, 14:16:48; Search time 43 Seconds

(without alignments)

443.045 Million cell updates/sec
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Title: US-09-647-544-2_COPY_140_337
Perfect score: 1025
Sequence: 1 GICARVDASFQPQGSLAPTA.....FLREIRTIASDPDERFFRV 198
Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Total number of hits satisfying chosen parameters: 100665

283416 segs, 96216763 residues

Searched:

Minimum DB seq length: 0 Maximum DB seq length: 198 Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database : PIR_79:*
1: pirl:*
2: pir2:*
3: pir3:*
4: pir4:*

Pred. No. ig the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

	Description	-2-	in	hypothetical prote		4	hypothetical prote		Ç		hypothetical prote	Φ	hypothetical prote	_	Ω	$\overline{}$	rubrerythrin - Met	30S ribosomal prot	acetyl transferase	virulence regulato	conserved hypothet	Ni, Fe-Hydrogenase	gonadoliberin II p	ı	al p	Φ	hypothetical prote	hypothetical prote	О	IS 426 transposase
SUMMARIES		47	151310	E75293	B71454	161890	E85068	AF0860	AE3363	A98075	C70686	G95210	H75017	AF2520	E75544	H81150	A69201	D83114	F86723	A82674	D83636	F71089	RHID2S	137024	F98333	AD2949	H84412	837713 .	AF3122	AG3158
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	Length	191	194	164	169	170	197	118	188	148	129	148	171	151	193	181	197	166	187	138	180	147	98	170	189	196	190	129	129	129
de	Query Match		7.2	6.9	6.9	•	6.9	6.9	6.8		6.7	6.7	9.9	9.9				6.5		6.4	6.4	6.4	6.3	•	٠		6.3		٠	
	Score	336	74	71	71	71	71	70.5	70	69.5	69	68.5	68	67.5	~	67	67	99	9.99	99	99	65.5	65	65	65	65	64.5	64	64	64
	Result No.	н	8	٣	4	S	9	7	œ	6	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	56	27	28	29

paralytic peptide	gonadoliberin II p	hypothetical prote	conserved hypothet	hypothetical prote	hypothetical prote	hemoglobin VIIB-6	hemoglobin VIIB-8	hypothetical prote	hypothetical prote	hypothetical prote	sulfur-regulated p	hypothetical prote	hemoglobin VIIB-5/	hemoglobin VIIB-5
JC7739	A53453	AH1330	H89940	B75029	AH1701	A30477	S04499	T32808	F84286	D83623	B56274	D84397	JT0292	JT0349
7 0	1 (1	~	~	7	N	ч	ч	~	7	7	~	~	-	-
131	85	178	194	108	178	161	161	193	164	180	182	102	161	161
6.2	. 7	6.2	6.1	6.1	6.1	6.0	0.9	6.0	6.0	6.0	6.0	6.0	6.0	6.0
64	63.5	63.5	63	62.5	62.5	62	62	62	61.5	61.5	61.5	61	61	61
30	35	33	34	35	36	37	38	39	40	41	42	43	44	45

ALIGNMENTS

RESULT 1 147230

VLA-2 F NAlter C;Speci C;Date: C;Acces R;Bahou Blood B A;Title	VLA-2 protein - pig (fragment) N;Alternate names: glycoprotein la/Ila N;Alternate names: glycoprotein la/Ila C;Species: Sus scrofa domestica (domestic pig) C;Date: 21-Feb-1997 #sequence_revision 21-Feb-1997 #text_change 09-Jul-2004 C;Accession: I47230; S21518 C;Accession: I47230; S21518 B;Bahou, W.F.; Porter, C.L.; Mirza, H. Blood 84, 3734-3741, 1994 A;Ittle: The VLA-2 (alpha 2 beta 1) I domain functions as a ligand-specific recognition A;Reference number: I47230; WUID:95036279; PMID:7949129
A; Acces	A;Accession: 14/230
A; Statu	A;Status: preliminary; translated from GB/EMBL/DDBJ
A; Molec	A;Wolecule type: mRNA
A; Resid	A;Residues: 1-191 <bah></bah>
A; Cross	A;Cross-references: UNIPROT:Q29124; EMBL:Z12137; NID:g2158; PIDN:CAA78125.1; PID:g2159
C; Keywo	C;Reywords: glycoprotein
Query Ma	Query Match 32.8%; Score 336; DB 2; Length 191;
Best Loc	Best Local Similarity 43.9%; Pred. No. 1.9e-23;
Matches	Matches 69; Conservative 27; Mismatches 61; Indels 0; Gaps 0;
රු අ	42 WSEVQTFLRRLVGKLFIDPEOIOVGLVQYGESPVHEWSLGDFRTKEEVVRAAKNLSRREG 101 -
cy	102 RETKTAQAIMVACTEGFSQSHGGRPEAARLLVVVTDGESHDGEELPAALKACEAGRVTRY 161
G	
oy	162 GIAVLGHYLRRQRDPSSFLREIRTIASDPDERFFFNV 198
Op	: : :
RESULT 151310 151310 C,Specia C,Specia C,Acces R,Venst MOI, WALL A,ACTES A,ACTES A,ACTES A,ACTES A,CTES A,CTES A,CTES C,SUPER	RESULT 2 151310 beta 8 integrin - chicken (fragment) beta 8 integrin - chicken (fragment) C.Speciese Gallus (chicken) C.Speciese Gallus (hicken) C.State: 04-Sep-1997 #sequence_revision 07-Nov-1997 #text_change 09-Jul-2004 C.Accession: I51310 Mol. Biol. Call 6, 419-431, 1995 A.Title: Beta 8 integrins mediate interactions of chick sensory neurons with laminin-1, A.Steference number: I51310, MUID:95352850; PMID:7542940 A.Accession: I51310 A.Accession: I51310 A.Accession: I51310 A.Molecule type: mRNA A.Molecule type: mRNA A.Molecule type: mRNA A.Molecule type: mRNA A.Kesidues: 1-194 <ven> A.Kesidues: 1-194 <ven> A.Cross references: UNIPROT:091415; GB:S78729; NID:g1042047; PIDN:AAB34966.1; PID:g10420 C.Superfamily: integrin beta chain; laminin-type EGF-like homology</ven></ven>

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Query Match 6.9%; Score 71; DB Best Local Similarity 25.7%; Pred. No. 34; Matches 35; Conservative 14; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      127 KASAGLLGAHAAAITAYALTL 147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Introns: 22/2; 74/3; 113/3
C; Superfamily: alpha-2-macroglobulin
                                                                                                                                                                                                                                                                                                                                                             FRSE--EELLHVLEKC 167
                                                                                                                                                                                                                                                                                                                            138 GESHDGEELPAALKAC 153
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A; Status: preliminary
A; Molecule type: DNA
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B71454
hypothetical protein PH0289 - Pyrococcus horikoshii
C;Species: Pyrococcus horikoshii
C;Secies: Pyrococcus horikoshii
C;Secies: Pyrococcus horikoshii
R;Kawarabayasi' Y; Sawada, M.; Horikawa, H.; Haikawa, Y.; Hino, Y.; Yamamoto, S.; Sekir
M,; Ohfuku, Y; Funabashi, T.; Tanaka, T.; Kudoh, Y.; Yamazaki, J.; Kushida, N.; Oguchi
DNA Res. S, 55-76, 1998
A;Title: Complete sequence and gene organization of the genome of a hyper-thermophilic a
A;Reference number: A7100; MUID:98344137; PMID:9679194
A;Reference number: A7100; MUID:98344137; PMID:9679194
A;Retus: preliminary; nucleic acid sequence not shown; translation not shown
A;Retus: preliminary; nucleic acid sequence not shown; translation not shown
A;Retus: Preliminary
A;References: UNIPROT:058027; GB:AP000001; NID:9325128; PIDN:BAA29361.1; PID:9325
A;Retus: preliminary accession replaces an interim accession for a sequence replaced by GenBank
C;Genetics:
A;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                hypothetical protein - Deinococcus radiodurans (strain R1)
C;Species: Deinococcus radiodurans
C;Species: Deinococcus radiodurans
C;Date: 03-Dec-1999 #sequence_revision 03-Dec-1999 #text_change 09-Jul-2004
C;Accession: B75233
R;Mhite, O.; Eisen, J.A.; Heidelberg, J.F.; Hickey, B.K.; Peterson, J.D.; Dodson, R.J.;
M.; Shen, M.; Vamathevan, J.J.; Lam, P.; McDonald, L.; Utterback, T.; Zalewski, C.; Ms Schick, H.O.; Venter, J.C.; Fraser, C.M.
S;Smith, H.O.; Venter, J.C.; Fraser, C.M.
A;Title: Genome sequence of the radioresistant bacterium Deinococcus radiodurans R1.
A;Accession: E75293
A;Accession: E75293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-164 <WHI>
A;Residues: 1-164 <WHI>
A;Cross-references: UNIPROT:Q9R846; GB:AE002060; GB:AE000513; NID:g6460082; PIDN:AAF1183
A;Experimental source: strain R1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     7
                                                                                                      75 VHEWSLGD----FRIKEEVVRAAKNLSRREGREIKTAQAIMVACTEGFSQSH-GGRPEAA 129
                                                                                                                                          82 -- DFRTKEEVVRAAKNLSRREGRETKTAQAIMVACTEGFSQSHGGRPEAARLLVVVTDGE 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    72 TAEGRIKKDAERLAAELALRE-LDGSDAPPVPAAPATPIAQQSEPWPIYAQVLAEAVEAA 130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    36 SNSIYPWSEVQTFLRRLVGKLFIDPEQIQVGLVQY---GESPVHE-----WSLG---- 81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      20 SRTLÝPMNAKGDLIARLV-----SLGLGTPTFEAEAHGPAHERTFHVKVWSSGQVIA 71
                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     28; Gaps
                                                          12;
     DB 2; Length 194;
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                                                       27; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 140 SHDGEELPAALKAC -- EAGRVTRYGIAVLGH 168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          6.9%; Score 71; DB 25.2%; Pred. No. 33; tive 19; Mismatches
                           Pred. No. 21;
7; Mismatches
ch 7.2%; Score 74; 1 Similarity 36.1%; Pred. No. 326; Conservative 7; Mismatch
                                                                                                                                                                                                                130 RLLVVVTDGESH 141
                                                                                                                                                                                                                                                               120 RLLLVMTDQTSH 131
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Best Local Similarity
Matches 38; Conserva
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Query Match
Best Local S
Matches 26
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A,Gene: DR2281
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C;Accession: I61890

R;Kawaguchi, H.; Zaleska-Rutczynska, Z.; Figueroa, F.; O'hUigin, C.; Klein, J.
Immunogenetics 35, 16-23, 1992
A;Title: C4 genes of the chimpanzee, gorilla, and orang-utan: evidence for extensive home A;Reference number: I37023; MUID:92104634; PMID:1729169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         C,Accession: E85068
R,anonymous, The Buropean Union Arabidopsis Genome Sequencing Consortium, The Cold Spring
Nature 402, 769-777, 1999
A,Title: Sequence and analysis of chromosome 4 of the plant Arabidopsis thaliana.
A,Reference number: A85001; MUID:20083488; PMID:10617198
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           67 PVIHRGMQGGLVGNDETVALTAFVTIALHHGLAVFQDEGAEPLKQRVEASISKANSFLGE 126
                                                                                                                                                                                                                                YSLSHVSSAMRVLEG------VGLVQRVKKPGDRKAYFIATKNFSEWRSSAFYEKI 101
                                                                                                                                                                                                                                                                                                                 ----RTKEEVVRAAKNLSRREGRETKTAQAIMVACTEGFSQSHGGRPEAAR-LLVVVTD 137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              34 DGSNSIYPWSEVQTFLRRLVGKLFIDPEQIQVGLVQYGESPVHEWSL-----GDFRTKE 87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        hypothetical protein AT4905450 [imported] - Arabidopsis thaliana
C;Species: Arabidopsis thaliana (mouse-ear cress)
C;Date: 16-Feb-2001 #sequence_revision 16-Feb-2001 #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      complement C4 - chimpanzee (fragment)
C;Species: Pan troglodytes (chimpanzee)
C;Date: 07-Jun-1996 #sequence_revision 07-Jun-1996 #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ----VHEWSLGDF----
                                                                                Gaps
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A;Map position: 4
C:Superfamily: ferredoxin [2Fe-2S]; ferredoxin [2Fe-2S] homology
C;Keywords: 2Fe-2S; metalloprotein
2; Length 169;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 2; Length 170;
                                                                            Indels
                                                                                45;
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                                                                                                                                                        40 YPWSEVQTFLRRLVGKLFIDPEQIQVGLVQYGESP---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Residues: 1-170 <RES>
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Matches 33; Conservative 19; Mismatches
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A;Cross-references: UNIPROT:Q8DNN2; GB:AE007317; PIDN:AAL00430.1; PID:g15459297; GSPDB:G
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A;Experimental source: strain H37Rv
C;Genetics:
A;Gene: Rv1720c
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          85 TKEEVVRAAKNLSRREGRETKTAQAIMVACTEGFSQSHGGR----PEAARLLVVVTDGES
                                                                                                           SEKILRAATELAQEVGPAHISLDA--VAARAGLSK--GGLLYSFPTKAKLLEAMVEKYM
      Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61 EQIQVGL-----VQYGESPVHEWSLGDFRTKEEVVRAAKNLSRREGRE 103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OKQEQCLGSQALRKFVSLAFENEDIDSISLNVF----EANQRAQNLYQKEGFE 130
                                                                                                                                                                                                        141 HDGEELPAALKACEAGRVTRYGIAVLGHY-LRRQRDPSSFLREIRTIASDPD 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               27;
      10;
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                                                                                                                                                                                                                                              Length 148;
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      Indels
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      49;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6.8%; Score 69.5; DE
25.7%; Pred. No. 40;
Live 23; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 6.7%; Score 69; DB Best Local Similarity 23.0%; Pred. No. 38; Matches 29; Conservative 19; Mismatches
      Mismatches
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      25;
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Best Local Similarity 25. ...
- Thes 29; Conservative 2
      Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Residues: 1-148 <KUR>
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      28;
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      Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AF0860
Myochtetical protein STY3093 [imported] - Salmonella enterica subsp. enterica serovar Typothetical protein STY3093 [imported] - Salmonella enterica serovar Typhi
A,Note: this species has also been called Salmonella typhi
A,Note: this species has also been called Salmonella typhi
C,Bates 2010 #sequence_revision 09-Nov-2001 #text_change 18-Nov-2002
C,Accession: AF0860
R,Parkhill, J.; Dougan, G.; James, K.D.; Thomson, N.R.; Pickard, D.; Wain, J.; Churcher, th, T.; Connerton, P.; Cronin, A.; Davis, P.; Davies, R.M.; Dowd, L.; White, N.; Farrar, S.; Moule, S.; O'Gaora, P.
Nature 413, 848-852, 2001
A,Authors: Parry, C.; Quail, M.; Rutherford, K.; Simmonds, M.; Skelton, J.; Stevens, K.; A; Reference number: AB0502; MUID:21534947; PMID:11677608
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A;Cross-references: UNIPROT:Q8YHB1; UNIPROT:Q8G0K2; GB:AE008917; PIDN:AAL52072.1; PID:g1
F;118,124,127,165/Binding site: 2Fe-2S cluster (Cys) (covalent) #status predicted
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A;Cross-references: GB:AL513382; PIDN:CAD06069.1; PID:g16504035; GSPDB:GN00176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               81 GDFRTKEEVVRAAKNLSRREGRETKTAQAIMVACTEGFSQSHGGRPEAARLLVVVTDGES 140
                                                                                                                                                                                                                                              29 KNLHRSYGHYLQSLPVVPRQARTSQEAWFLKSHKFCTSSTTSSENGDEETEKITIIFVD- 87
                                                                                                                                                                                                                                                                                                                                                                                  --KDGEEIPVKVPIGMSVLEAAHENDIDLEGACEASLACSTCHVIVMDTEYYNKLEEPT 144
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                                                                                                                                                                                                                                                                                                                                     139 ESHDGEELPAALK------ACEAGRV--TRYGIAVLGHYLRRQRDPS 177
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------WEKDAFLRKVKTGMIKPDE 109
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                                                                        DB 2; Length 197;
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                                                                                                                                      39; Indels
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Pred. No. 48;
                                                                 6.9%; Score 71; DB 22.7%; Pred. No. 41; ive 15; Mismatches
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                                                          Query Match
Best Local Similarity 22.7
Matches 27; Conservative
                                                                                                                                                                                                     94 KNLSRREG-----
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Best Local Similarity
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A,Gene: BMEI0891
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A;Residues: 1-151 «KUR»
A;Cross-references: UNIPROT:Q8YKF6; GB:BA000020; PIDN:BAB77100.1; PID:g17134541; GSPDB:G1
A;Experimental source: strain PCC 7120
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R;White, O.; Eisen, J.A.; Heidelberg, J.F.; Hickey, E.K.; Peterson, J.D.; Dodson, R.J.; I

M.; Shen, M.; Vamathevan, J.J.; Lam, P.; McDonald, L.; Utterback, T.; Zalewski, C.; Mal

Science 286, 1571-1577, 1999

A;Title: Genome sequence of the radioresistant bacterium Deinococcus radiodurans R1.

A;Reference number: A75250; MUID:20036896; PMID:10567266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Cross-references: UNIPROT:O9RXR1; GB:AE001886; GB:AE000513; NID:g6457921; PIDN:AAF09826.
A;Experimental source: strain R1
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   ----RIKEEVVRAAKNLSRREGRETKTAQAIMVACTEGFSQSHGGRPEAAR-LLVVVTD 137
                                                                 102 LRDIDETKESIMRALEELEGEGGSEVEEIKEKLKMALR-----RNEVARKLLTLIMQ 153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C.Species: Deinococcus radiodurans
C.Date: 03-Dec-1999 #sequence_revision 03-Dec-1999 #text_change 09-Jul-2004
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   50 RRLVGKLFIDPEQIQVGLVQYGESPVH-EWSLGDFRTKEEVVRAAKNLSRRE 100
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Best Local Similarity 24.5%; Pred. No. 84;
Matches 40; Conservative 22; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
6.6%; Score 67.5; DB
Best Local Similarity 26.9%; Pred. No. 63;
Matches 14; Conservative 19; Mismatches
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154 FKSE--EELLKVLESC 167
                                                                                                                                      138 GESHDGEELPAALKAC 153
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A,Status: preliminary
A,Molecule type: DNA
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A, Status: preliminary
A, Molecule type: DNA
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   84
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C; Species: Streptococcus pneumoniae
C; Species: O3-Aug-2001 #sequence_revision 03-Aug-2001 #text_change 09-Jul-2004
C; Date: 03-Aug-2001 #sequence_revision 03-Aug-2001 #text_change 09-Jul-2004
C; Accession: G95210
R; Tettelin, H.; Nelson, K.E.; Paulsen, I.T.; Eisen, J.A.; Read, T.D.; Peterson, S.; Heid on, J.D.; Umayam, L.A.; White, O.; Salzberg, S.L.; Lewis, M.R.; Radune, D.; Holtzapple, nson, T.; Hickey, E.K.; Holt, I.E.
Science 293, 499-506, 2001
A; Attle: Complete Genome Sequence of a virulent isolate of Streptococcus pneumoniae.
A; Reference number: A95000; MUD:21357209; PMID:11463916
A; Accession: G95210
A; Accession: G95210
A; Accession: G95210
A; Residuse: 1-148 «KIR»
A; Residuse: 1-148 «KIR»
A; Residuse: 1-148 «KIR»
A; Crass-references: UNIPROT:Q97P37; GB:AE005672; PIDN:AAK75880.1; PID:G14973306; GSPDB:GA; C; Ganetics:
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                                                                                                           52 YSISHISSAMKVLEG------VGLVQRIKKPGDRRAYFVATKNFSEWRSSAFYEKI 101
                                                                 VGLVQYGESPVHEWSLGDFRTKEEVVRAAKNLSRREGRETKTAQAI----MVACTEGFSQS 121
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   --EVIGAIRQAVVRQLISDHEGL
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24.3%; Pred. No. 65;
tive 17; Mismatches 44; Indels
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6.7%; Score 68.5; DB 2; Length 1
Best Local Similarity 25.0%; Pred. No. 50;
Matches 28; Conservative 25; Mismatches 34; Indels
   17 PAG--AAVARRIRGETVHAPAHFDV-
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RESULT 15
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hyportein NMBO861 [imported] - Neisseria meningitidis (strain MC58 serogroup C,Species: Neisseria meningitidis
C,Species: Neisseria meningitidis
C,Date: 31-Mar-2000 #sequence_revision 31-Mar-2000 #text_change 09-Jul-2004
C,Accession: H8150; PR8187.
R,Tettelin, H.; Saunders, N.J.; Heidelberg, J.; Jeffries, A.C.; Nelson, K.E.; Eisen, J.P. Hickey, E.K.; Haft, D.H.; Salzberg, S.L.; White, O.; Fleischmann, R.D.; Dougherty, B.A.; Try. H.; Qin, H.; Vamathevan, J.; Gill, J.; Scarlato, V.; Masignani, V.; Pizza, M. Science 287, 1809-1815, 2000.
A,Authors: Grandi, G.; Sun, L.; Smith, H.O.; Fraser, C.M.; Moxon, E.R.; Rappuoli, R.; Anthors: Grandi, G.; Sun, L.; Smith, H.O.; Fraser, C.M.; Moxon, E.R.; Rappuoli, R.; Anthors: Grandi, G.; Sun, L.; Smith, H.O.; Fraser, C.M.; Moxon, E.R.; Rappuoli, R.; Anthors: Apacense or undber: A81000; MUID:2017575; PMID:10710307
A; Scheronce number: A81000; MUID:2017575; PMID:10710307
A; Residues: 1-181 <-TET>
A; Cross-references: UNIPROT:Q9JR36; GB:AE002439; GB:AE002098; NID:g7226100; PIDN:AAF4127
A; Residues: 1-181 <-TET>
A; Residues: 1-181 <-TET>
A; Residues: UNIPROT:Q9JR36; GB:AE002439; GB:AE002098; NID:g7226100; PIDN:AAF4127
A; Residues: UNIPROT:Q9JR36; GB:AE002439; SD.; Churcher, C.; Klee, S.R.; Morell; Holroyd, S.; Jagels, K.; Leather, S.; Moule, S.; Mungall, K.; Quail, M.A.; Rajandream, N.; Leather, S.; Moule, S.; Mungall, R.; Quail, M.A.; Rajandream, A; Reference number: A81775; MUID:20222556; PMID:10761919
A; Recession: Hells:
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A;Experimental source: serogroup A, strain 22491
C;Genetics:
A;Gene: NMB0861; NMA1073
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6.5%; Score 67; DB 2; Length 181;
Best Local Similarity 23.5%; Pred. No. 87;
Matches 28; Conservative 17; Mismatches 48; Indels
128 ------AARLLV-VVTDGESHDGEELPAA 149
                                        116 RVRVDVGGFRKRQADTLTKLAERLAVQVAKSGEPHELQPMPPA 158
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A,Molecule type: DNA
A,Residues: 1-181 <PAR>
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XM MEDINE=95036279; PubMed=7949129;

XM EDLINE=95036279; PubMed=7949129;

ABADOU W.F., Potter C.L., Mirza H.;

Bahou W.F., Potter C.L., Mirza H.;

The VIA-2 (alpha 2 beta 1) I domain functions as a ligand-specific recognition sequence for endothelial cell attachment and spreading:

The VIA-2 (alpha 2 beta 1) I domain functions as a ligand-specific recognition sequence for endothelial cell attachment and spreading:

The VIA-2 (alpha 2 beta 1) I domain functions as a ligand-specific recognition sequence for endothelial cell attachment and spreading:

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Sus scrofa (Pig).
Bukaryota, Metazoa, Chordata, Craniata, Vertebrata,
Mammalia, Eutheria, Cetartiodactyla, Suina, Suidae,
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Q8MVP6
Q8YBB1
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Q97P37
Q97P37
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SEQUENCE
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                      GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd
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Match Length DB
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70 YGESPVHEWSLGDFRTKEEVVRAAKNLSRRE--GRETKTAQAIMVACTEGFSQSHGGRPE 127
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              11 CQNYYDLTLILDESASIGSKNWKSHVIPFTDKIIKDLTISKNEVHVGILLFSSKNRDYVT 70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     23 CPTYMDVVIVLDGSNSI--YPW-SEVQTFLRRLVGKLFIDPEQIQVGL------VQ 69
                                                                              14 FVEEVIRRMDVGQDGIHVTVLQYSYVVTVEHSFREPQSKDVVLQRLREVRYRGGNQTNTG 73
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MEDILINE=22248966; PubMed=12361966;

MEDILINE=22248966; PubMed=12361966;

Davidson B.J., Swalla B.J., 
                                                                                                                                                             108 QAIMVACTEGFSQSHGGRPEAARLLVVVTDGESHDG-EELPAALKACEAG 156
                                                                                                                                                                                                          Plasmodium falciparum.
Bukaryota; Alveolata; Apicomplexa; Haemosporida; Plasmodium.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRAIN=3D7;

Doerig C.D., Doerig C.M.;
Submitted (JUN-1955) to the EMBL/GenBank/DDBJ databases.
EMBL; X87840; CAA61109.1; -.
INTERPO.; IPRO02035; VWF_A.
Pfam; PF00092; VWA; 1.
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Stolidobranchia; Pyuridae; Boltenia.
NCBI_TaxID=63515;
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01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
01-UNN-2003 (TrEMBLrel. 24, Last annotation update)
Collagen-like protein 3 (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-MAY-1999 (TrEMBLrel. 10, Created)
01-MAY-1999 (TrEMBLrel. 10, Last sequence update)
01-MAX-2002 (TrEMBLrel. 20, Last annotation update)
Thrombospondin-related anonymous protein (Fragment)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRT;
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SMART; SMO0327; VWA; 1.
PROSITE; PS50234; VWFA; 1.
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122 APKVTILFTDGNEN 135
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Q8MVN3
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  116 EGFSQSHGGRPBAARLLVVVTDGESHDGEELPAALKACEAGRVTRYGIAVLGHYLRRQRD 175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            63 YAYSAASGGRRSATKVWVVVTDGESHDGSMLKAVIDQCNHDNILRFGIAVLGYLNRNALD 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3 LDIGPTKTQVGLIQYANNPRVVFNLNTYKTKEEMIVATSQTSQYGGDLTNTFGAIQYARK 62
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Mammalia, Eutheria, Cetartiodactyla, Ruminantia, Pecora, Bovidae,
Bovinae, Bos
                                                                                                                                                                                                                  Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
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10.1%; Score 103.5; DB 2; Length 143;
Best Local Similarity 23.6%; Pred. No. 0.29;
Matches 26; Conservative 27; Mismatches 56; Indels 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ch 29.2%; Score 299; DB 2; Length 156; 
1 Similarity 44.1%; Pred. No. 1.5e-18; 
63; Conservative 24; Mismatches 56; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GO; GO: 0007229; P:integrin-mediated signaling pathway; IEA. InterPro; IPR002035; VWF_A. Effan; PP00092; VWA; 1. PRINTS; PR00423; VWA; 1. SMART; SM00327; VWA; 1. PROSITE; PS50234; VWA; 1.
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EMBL, AP004285; AAB61376.1; -.
InterPro; IPR002035; VWP.A.
Pfam, PF00092; VWA; 1.
PROSITE; PS50234; VWFA; 1.
PROSITE; PS50234; VWFA; 1.
NON_TER 1 143 143
SEQÜENCE 143 AA; 16099 MW; D472A917993E1C5A CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                             Kunicki T.J., Kritzik M.R.;
Submitted (JUN-2000) to the EMBL/GenBank/DDBJ databases.
EMBL; AF035968; AAC94975.1; --
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05-JUL-2004 (TrEMBLrel. 27, Last sequence update)
05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
Von Willebrand Factor (Fragment).
Bos taurus (Bovine).
                                         05-JUL-2004 (TrEMBLrel. 27, Last sequence update)
05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         176 PSSFLREIRTIASDPDERFFFNV 198
    Created)
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156 156
156 AA; 17042 MW;
    05-JUL-2004 (TrEMBLrel. 27,
                                                                                                               Integrin alpha 2 (Fragment)
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                                                                                                                                                                                              Homo sapiens (Human)
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24; Gaps

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144 -EELPAAL-KACEAG-----RVTRYGIA----VLGHY
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                     원
 8
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                                                                                                                                                                                   18 PTAQR-CPTY--MDVVIVLDGSNSI--YPWSEVQTFLRRLVGKLFIDPEQIQVGLVQYGE 72
                                                                                                                                                                                                 31 PCCSRPCPPYAVMDIVLVLDSSSSIGAENWLMLTDFVRGIINSFIVAEDAANFAIFRYNR 90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2 ANRNDSRRDSRKDRKKDDIEDQLVAINRITKVVKGGRRMRFAAVVIVGDRKGHVGFGTGK 61
                                                                                                                                                                                                                                                  91 DVDVTTQILLNSYPGDIDGLTQAFGRIPYDGSGTFTGQGLGHALRVSLSPANGNRP 146
                                                                                                                                                                                                                                   73 --SPVHEWSLGDFRTKEEVVRAAKNLSRREGRETKTAQAIMVACTEGFSQSHGGRP 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pridmore R.D., Berger B., Desiere F., Vilanova D., Barretto C., Prittet A.-C., Zwahlen M.-C., Rouvet M., Altermann B., Barrangou R., Mollet B., Macronier A., Klaenhammer T., Arigoni F., Schell M.A.; "The genome sequence of the problotic intestinal bacterium Lactobacillus johnsonii NCC 533."; Proc. Natl. Acad. Sci. U.S.A. 101:2512-2517(2004).
-I- SIMILARITY: Belongs to the ribosomal protein S5P family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         h 7.8%; Score 79.5; DB 2; Length 174; Similarity 32.0%; Pred. No. 50;
                                                                                                                                  DB 2; Length 153;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL, AE017201, AAS08342.1; -. GO, GO:0005622; C:intracellular; IEA. GO, GO:0015935; C:amall ribosomal subunit; IEA. GO; GO:0003735; F:structural constituent of ribosome; IEA. GO; GO:000412; P:protein biosynthesis; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    13; Mismatches 34; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                    Bacteria; Firmicutes; Lactobacillales; Lactobacillaceae;
Lactobacillus.
                                                                                                                                                           19; Mismatches 61; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Complete proteome, RIbonucleoprotein, Ribosomal protein. SEQUENCE 174 AA; 18717 MW; A922015D6183BA43 CRC64;
                                                                                              153
16666 MW; 3B02FA147CE5CB86 CRC64;
                                                                                                                                                                                                                                                                                                                                                           Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                       174 AA
                                                                                                                                  7.9%; Score 80.5; I
25.0%; Pred. No. 35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  InterPro; IPR000851; Ribosomal S5.
InterPro; IPR005712; Ribosomal S5 b/o.
InterPro; IPR005324; Ribosomal S5 C.
                                                                                                                                                                                                                                                                                                                                                Created)
                                                                                                                                                                                                                                                                                                                       PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pfam; PF00333; Ribosomal_S5; 1.
Pfam; PF03719; Ribosomal_S5_C; 1.
TIGRFAMs; TIGRO1021; FD8E bact; 1.
PROSITE; PS00585; RIBOSOWAL_S5; 1.
PROSITE; PS50881; S5_DSRBD; 1.
           InterPro; IPR002035; VWF A.
                                                                                                                                                                                                                                                                                                                                                           05-JUL-2004 (TrEMBLrel. 27, 05-JUL-2004 (TrEMBLrel. 27,
                                 Pfam, PF00092; VWA; 1.
PROSITE; PS50923; SUSHI; 1.
PROSITE; PS50234; VWFA; 1.
                                                                                                                                                                                                                                                                                                                                              (TrEMBLrel. 27,
                                                                                                                                                                                                                                                                                                                                                                                  30S ribosomal protein S5.
OrderedLocusNames=LJ0354;
Lactobacillus johnsonii.
                                                                                                                                                           29; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     31; Conservative
                                                                                                                                                                                                                                                                                                                      PRELIMINARY;
                                                                                             153 1
153 AA;
                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                NCBI_TaxID=33959;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PubMed=14966310;
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05-JUL-2004
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SEQUENCE
                                                                         Collagen.
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This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isp-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       54 GKLFIDPEQIQ-----VGLVQYGESPVHEWSLGDFRTKEEVVRAAKVLSRREGRETKTAQ 108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      28 QGTCKKVAQRSPNVNYDFCVKSLGADPKSHTADLQGLGVISANLAIQHGSKIQTFIGRIL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               QGSLAPTAQRCPTY---------MDVVIVLDGSNSIYPWSEVQTFLRRLV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7.8%; Score 79.5; DB 1; Length 179;
24.8%; Pred. No. 51;
ive 25; Mismatches 39; Indels 39; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Asturias J.A., Ibarrola I., Eraso E., Arilla M.C., Martinez A.; "The major Platanus acerifolia pollen allergen Pla a 1 has sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A., SEQUENCE OF 24-35; 49-55; 61-71; 113-121 AND 151-158, AND TISSUE SPECIFICITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Putative invertase inhibitor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 homology to invertase inhibitors.";
Clin. Exp. Allergy 33:978-985(2003).
-!- FUNCTION: Invertase inhibitor (Potential).
-! SUBCELLULAR LOCATION: Secreted.
-!- TISSUE SPECIFICITY: Pollen and stem, but not leaves.
-!- ALLERGEN: Causes an allergic reaction in human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  By similarity.
By similarity.
152B025E98879C5A CRC64;
62 AQEVPEAIRKAVEAGKKRMIKVPTVGTTIPHEVMGHY 98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       InterPro; IPR006501; PME inhib.
InterPro; IPR007186; PMEI.
Pfam, PF04043; PMEI.
TIGRRAMs; TIGR01614; PME inhib; 1.
Allergen; Direct protein sequencing; Signal.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE=22744443; PubMed=12859456;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      109 AI -- MVACTEGFSQSHG 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        135 ALDDSVTCEDGFKEKKG 151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              102 142 E
179 AA; 19282 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL; AJ427413; CAD20556.1;
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Best Local Similarity 24.8*
Matches 34; Conservative
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Q6Z2B0;
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ID Q6
AC Q6
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83 LVA-----
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                                                                                                 Query Match
Best Local Similarity
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nes 36; Conserv
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Matches
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MEDLINE=9535860; PubMed=7542940;

Venstrom K., Reichardt L.;

Venstrom K., Reichardt L.;

Venstrom K., Reichardt L.;

Venstrom K., Reichardt L.;

I mannin-1, collagen IV, and fibronectin.";

Mol. Biol. Cell 6:419-431(1995).

Mol. Biol. Cell 6:419-431(1995).

Rembl. S78729; Abm34966.2; -.

Rembl. S78729; Abm34966.2; -.

Rembl. S78729; Abm34966.2; -.

Rempl. S78729; Abm34966.2; -.

Rempl. S78729; Abm34966.2; -.

Rempl. S78729; Abm34966.2; -.

Rempl. S78729; Pintegrin complex; IEA.

GO; GO:0007160; P:cell-matrix adhesion; IEA.

GO; GO:0007259; Pintegrin beta; 1.

Refam; PF00362; Integrin beta; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           35 VAVRVQQLAVRVQQL--RAAHHVEIYNFSSTEELDRSVDRPQIMDSRNLSRRKQRARLEH 92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2 ICARVDASFQPQGSLAPTA-----QRCPTYMDVVIVLDGSNSIYPWSEVQTFLRRLVGK 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-NOV-1996 (TrEMBLrell. 01, Last sequence update)
01-MAR-2004 (TrEMBLrell. 26, Last annotation update)
Beta 8 integrin (Fragment).
Name=beta 8 integrin,
Name=beta 8 integrin,
Statlus gallus (Chicken).
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     55; Gaps
                                                                                                                                    P0467G09.7).
Mame=0J1034 (C08.33; Synonyms=P0467G09.7;
Oryza sativa (laponica cultivar-group).
Bukaryota, Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
Ehrhartoideae; Oryzeae; Oryza.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 181;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     41; Indels
                                  05-JUL-2004 (TrEMBLrel. 27, Last sequence update)
05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
Hypothetical protein OJ1034_C08.33 (Hypothetical protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
Sasaki T., Matsumoto T., Yamamoto K.;
Sasaki T., Matsumoto T., Yamamoto K.;
Submitted (JAN-2002) to the EMBL/GenBank/DDBJ databases.
EMBL, AP0053831, BAD011379.1;
EMBL, AP004694; BAD01303.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                         Sasaki T., Matsumoto T., Katayose Y.;
Submitted (JUN-2002) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Hypothetical protein.
SEQUENCE 181 AA; 20089 MW; 9A2871CF7132993F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 74.5; DB 2;
Pred. No. 1.4e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LCA-----PHGQLSDGSHGGRRRRCP-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      105 KTAQAIMVACTEGFSQSHGGRPEAARLLVVVT 136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KTADG-----DERERSEEGRRQIAVRLAAVVS 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               194 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  18; Mismatches
   (TrEMBLrel. 27, Created)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              38; Conservative
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                                                                                                                                                                                          75 VHEWSLGD----FRTKEEVVRAAKNLSRREGRETKTAQAIMVACTEGFSQSH-GGRPEAA 129
                                                                                                                                                                                                                                                         67 IHVLSLTDNIAEPRNAVNKOKISGNIDTPEGGFDAMLQAAV-----CQSHIGWRKEAK 119
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ikeda H., Ishikawa J., Hanamoto A., Shinose M., Kikuchi H., Shiba T., Sakaki Y., Hattori M., Omura S.;
"Complete genome sequence and comparative analysis of the industrial microorganism Streptomyces avermitilis.";
Nat. Biotechnol. 21:526-531(2003).
EMBL; APODSO34; BAC70924.1;
GO; GO:0016491; F:oxidoreductase activity; IEA.
GO; GO:0016118; P:electron transport; IEA.
InterPro; IPR000415; Nitroreductase.
PFam; PF00881; Nitroreductase.
                                                                                                                              12; Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STRAIN=MA-4680;
MEDLINE=21477403; PubMed=11572948; DOI=10.1073/pnas.211433198;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Bacteria; Actinobacteria; Actinobacteridae; Actinomycetales;
Streptomycineae; Streptomycetaceae; Streptomyces.
NCBI_TaxID=33903;
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                                           Score 74; DB 2; L.C. Pred. No. 1.7e+02;
21847 MW; B845301262330547 CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Proc. Natl. Acad. Sci. U.S.A. 98:12215-12220(2001)
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28.1%; Pred. No. 2.2e+02;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      196 AA
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01-JUN-2003 (TrEMBLrel. 24, Last sequen
01-OCT-2003 (TrEMBLrel. 25, Last annotate)
Putative nitroreductase family protein.
OrderedLocusNames=SAV3213;
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MEDLINE=22608306; PubMed=12692562;
                                                                                         36.1%;
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                                                                                                                              26; Conservative
                                                                                                                                                                                                                                                                                                                           130 RLLVVVTDGESH 141
                                                                                                                                                                                                                                                                                                                                                                                    RLLLVMTDOTSH 131
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155 AGRUTRYGIAVLGHY 169
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Putative phage protein.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRAIN=K96243
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                                                                                                                                                                        Von Willebrand Factor (Fragment).
Cavia porcellus (Guinea pig).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Butheria, Rodentia, Hystricognathi, Cavidae, Cavia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Preisig-Mueller R., Derst C., Mederos y Schnitzer M., Daut J.; Submitted (OCT-1998) to the EMBL/GenBank/DDBJ databases.
EMBL; AF099-09; AAD16289.1; -.
HSSP; P04275; JOAK.
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Burkholderiaceae; Burkholderia.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  134 AA; 14852 MW; FF6C97E931434B5F CRC64;
                                                                                                                              01-MAY-1999 (TrEMBLrel. 10, Last sequence update) 01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
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25-OCT-2004 (TrEMBLrel. 28, Last sequence update)
25-OCT-2004 (TrEMBLrel. 28, Last annotation update)
Putative bacteriophage tail protein I.
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                                                                134 AA
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FVVSVMERLHISQKRIRVAVVEY 110
                                                                                                             Created)
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MEDLINE=99345814; PubMed=10409222;
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                                                                                                        01-MAY-1999 (TrEMBLrel. 10,
                                                             PRELIMINARY;
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PubMed=15377794;
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SEQUENCE
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88 AVREVCASFGANVAMREWFEKTPKGRPGTFEILMTV---GARDG--IPATAEYVADIIAE 142
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EMBL; BX511965; CAH34140.1; "BRBL; BX51196
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Rabbinowitsch E., Rutherford K., Sanders M., Simmonds M., Songsivilai S., Stevens K., Tumapa S., Vesaratchavest M., Whitehead S., Yeats C., Barrell B.G., Oyston P.C.F., Parkhill Genomic plasticity of the causative agent of melioidosis, Burkholderia pseudomallei.";
Proc. Natl. Acad. Sci. U.S.A. 101:14240-14245(2004).
EMBL, BX571966; CAH38548.1; - SEQUENCE 184 AA; 20280 MW; 4C81CE777D6078B2 CRC64;
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Bacteria, Proteobacteria, Betaproteobacteria, Burkholderiales;
Burkholderiaceae, Burkholderia.
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25-OCT-2004 (TrEMBLrel. 28, Last sequence update)
25-OCT-2004 (TrEMBLrel. 28, Last annotation update)
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Sasaki T., Matsumoto T., Katayose Y.; Submitted (OCT-2002) to the EMBL/GenBank/DDBJ databases
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MEDLINE=2182632; PubMed=11832943; DOI=10.1038/415630a;
Beja O., Suzuki M.T., Heidelberg J.F., Nelson W.C., Preston C.M.,
Hamada T., Eisen J.A., Fraesr C.M., DeLong E.F.;
"Unsuspected diversity among marine aerobic anoxygenic phototrophs.";
Nature 415:630-633(2002).
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Oryza sativa (japonica cultivar-group).
Bukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
Ehrhartoideae; Oryzeae; Oryza.
NBI_TAXID=39947;
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BKSP; PA7772; 10FH.

MEROPS; T01.006; -.

GO; GO:0005839; C:proteasome core complex (sensu Eukaryota); IEA.

GO; GO:0006457; F:endopeptidase activity; IEA.

GO; GO:0006457; F:protein folding; IEA.

GO; GO:0006581; P:response to unfolded protein; IEA.

GO; GO:0006511; P:ubiquitin-dependent protein catabolism; IEA.

Fram; PF0027; Proteasome_A.B.

Pfam; PF0027; Proteasome_A.B.
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05-JUL-2004 (TrEMBLrel. 27, Last sequence update)
25-OCT-2004 (TrEMBLrel. 28, Last annotation update)
Hypothetical protein OSJNBa0091C16.20 (Hypothetical protein
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Last annotation update)
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     143 VDRAKR-GTA---HY 153
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Best Local Similarity 23.18
Matches 43; Conservative
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Name=hslv;
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SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                16 SPSPPG-----PLTRDIYILSPNPNLIPTPFSYPQSP-----RRLVA-----
                                                                                                                                                                                                                                                                            / Match 7.1%; Score 72.5; DB 2; Length 187; Local Similarity 26.0%; Pred. No. 2.3e+02; nes 53; Conservative 17; Mismatches 73; Indels 61; Gaps
                                Sasaki T., Matsumoto T., Yamamoto K.;
Submitted (MAR-2002) to the EMBL/GenBank/DDBJ databases
                                                                                            EMBL; AP005820; BAD22464.1; -.
EMBL; AP004884; BAD21948.1; -.
Hypothetical protein.
SEQUENCE 187 AA; 20415 MW; 96A0FCC9628681DE CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    169 YLRRQRDPSSFLREIRTIASDPDE 192
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FROM N.A.
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5.1.6
Compugen Ltd.
GenCore version
Copyright (c) 1993 - 2005
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6, 2005, 14:15:53 ; Search time 178 Seconds (without alignments) 430.217 Million cell updates/sec protein search, using sw model April OM protein Run on:

US-09-647-544-2_COPY_140_337

1025 1 GICARVDASFQPGGSLAFTA......FLREIRTIASDPDERFFFNV 198 Perfect score: Sequence:

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

2105692 seqs, 386760381 residues Searched:

1433677 Total number of hits satisfying chosen parameters:

seg length: 0 seg length: 198 Minimum DB Maximum DB

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

geneseqp2003as:* geneseqp2003bs:* Genesed 16Dec04:* geneseqp1990s:*geneseqp2000s:* geneseqp2001s:* geneseqp2002s:* geneseqp1980s:* geneseqp2004s:* Database

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

nostrintion		Aau76862 Human int	Aau76853 Human int	Adr23227 Human int	Aau76863 Human int	Aau76854 Human int		Adr23225 Human int	Aae33535 Rat-human	Aae33537 Human alp	Aae33536 Rat alpha	Aau76851 Human int	Aau76860 Human int	Adr23226 Human int	Abp54908 Integrin	Aau76852 Human int	Aau76861 Human int	Aau09125 Human int	Aau19634 Human nov	Aau19794 Human nov	Human	Human	Human	Adc10976 Human pro	Aau19822 Human nov	Aau87675 Novel cen
5		AAU76862	AAU76853	ADR23227	AAU76863	AAU76854	ADR23228	ADR23225	AAE33535	AAE33537	AAE33536	AAU76851	AAU76860	ADR23226	ABP54908	AAU76852	AAU76861	AAU09125	AAU19634	AAU19794	ABP47854	ABP48014	ADC10816	ADC10976	AAU19822	AAU87675
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Query		89.0	89.0	89.0	48.0	48.0	48.0	41.7	41.4	41.4	40.9	40.7	40.7	38.9	38.3	38.0	38.0	36.5	27.9	27.9	27.9	27.9	27.9	27.9	27.5	27.5
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2 C C C C C C C C C C C C C C C C C C C	45

ALIGNMENTS

Human; integrin alpha subunit; A domain; Alpha 10; integrin beta subunit; A-like domain; inflammatory disorder; skeletal muscle injury; restenosis; ischaemia-reperfusion injury; immune complex; parasitic disease; mutant; antilnflammatory; vasotropic; antiparasitic; vulnerary; gene therapy; Human integrin alpha subunit Alpha 10 variant A domain. AAU76862 standard; protein; 195 AA (first entry) 21-MAY-2002 AAU76862; mutein.

Homo sapiens. Synthetic.

Location/Qualifiers

/note= "Wild-type Ile substituted by any other amino acid" Key Misc-difference 193 WO200209737-A1

07-FEB-2002.

31-JUL-2000; 2000US-0221950P. 11-JAN-2001; 2001US-00758493. 13-MAR-2001; 2001US-00805354. 31-JUL-2001; 2001WO-US023957.

(GEHO) GEN HOSPITAL CORP.

Li R, Xiong J; Arnaout AM,

WPI; 2002-188687/24.

Novel high affinity integrin polypeptide useful for treating restenosis and parasitic diseases, comprises all or part of variant integrin alpha subunit A domain or variant integrin beta subunit A-like domain.

Claim 53; Page; 55pp; English.

The invention relates to a high affinity integrin polypeptide comprising all or part of a variant integrin alpha subunit A domain or a variant

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CD11b alpha subunit A domain, where I at residue 332 has been replaced by G or A, F at residue 312 has been replaced by G or A at residue 310 have been replaced by C, or for determining if a dat residue 320 have been replaced by C, is useful for determining if a dat residue 320 have been replaced by C, is useful for determining if a date compound is a candidate compound for binding to CD11b or for treating an inflammatory disorder, by contacting a test compound with the polypeptide and determining if the test compound binds skeletal muscle injury, for treating disorders caused by ischaemia-tro purify variant integrin polypeptide ligands and parastic diseases, reperfusion injury, immune complexes, restenosis and parastic diseases, to purify variant integrin polypeptide ligands and as bait proteins in two-hybrid or three-hybrid assays. This sequence represents a human integrin alpha subunit Alpha 10 variant A domain. Note: This variant sequence is not featured in the specification but has been derived from the wild-type protein shown in AAU76853
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                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
  integrin beta subunit A-like domain. The polypeptide, preferably the
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                                                                                                                                                                                                                                                                                                                                                                        89.0%; Score 912; DB 5; Length 195; 100.0%; Pred. No. 2e-96; ive 0; Mismatches 0; Indels
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----- 0; Indels
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11-JAN-2001; 2001US-00758493.
13-MAR-2001; 2001US-00805354.
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Matches 176; Conservative
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                                                                                                                                                                                                                                                                                                                                  Sequence 195 AA;
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The invention relates to a high affinity integrin polypeptide comprising all or part of a variant integrin alpha subunit A domain or a variant integrin beta subunit A-like domain. The polypeptide, preferably the CD11b alpha subunit A domain, where I at residue 312 has been replaced by G or A, F at residue 313 and A at residue 320 have been replaced by C, or V at residue 315 and A at residue 320 have been replaced by C, or Or CD1b or for treating an inflammatory disorder, by contacting a test compound is a candidate compound for binding to CD1b or for treating an inflammatory disorder, by contacting a test compound with the polypeptide and determining if the test compound binds to the polypeptide. The integrin subunits a test useful for reducing skeletal muscle injury, for treating disorders caused by ischaemianer purity variant integrin polypeptide ligands and parasitic diseases, to purify variant integrin dolypeptide ligands and as bait proteins in two-bybrid or three-hybrid assays. This sequence represents the human integrin alpha subunit Alpha 10 A domain
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                                                                                                                                                                                                                                                                                                                                                                                    0; Gaps
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                                                                                                                                                                                                                                                                                                                                               89.0%; Score 912; DB 5; Length 195; 100.0%; Pred. No. 2e-96; ive 0; Mismatches 0; Indels
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/label = A_domain
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Best Local Similarity 100.0
Matches 176; Conservative
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                                                                                                                                                                                                                                                                                                               Sequence 195 AA;
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31-JUL-2000; 2000US-021950P. 11-JAN-2001; 2001US-00758493. 13-MAR-2001; 2001US-00805354.

(GEHO) GEN HOSPITAL CORP.

Xiong J;

Li R,

Arnaout AM,

WPI; 2002-188687/24.

31-JUL-2001; 2001WO-US023957

07-FEB-2002

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The present sequence is that of the human integrin alpha 10 subunit A domain. This includes an invariant Ile residue. The invention features contain integrin alpha subunit polypeptides in which the invariant Ile is substituted by Gly, Ala or some other amino acid (e.g. Val) or is cableted. The polypeptide can include part or all of the A domain. Replacing the invariant Ile creates a variant integrin polypeptide that is southing the invariant Ile creates a variant integrin polypeptides) than the wild type form of the subunit. Variant integrin polypeptides of the invention are useful in assays for compounds that bind to a variant ligand, that interfere with or enhance the binding of an integrin ligand to integrin, and for identifying activation.

Specific ligands. They are also useful for generating antibodies, e.g. on integrin some such antibodies recognise an epitope that is either not present or not accessible on an integrin that is in a lower affinity of present or not accessible on an integrin that is in a lower affinity of conformation. The invention also provides methods of administering a variant integrin polypeptide, or an antibod, that selectivity binds it, to identify a ligand which binds to an active integrin. Such assays are useful for diagnosing inflammation, e.g. occult inflammation (e.g. useful for diagnosing inflammation, e.g. occult inflammation (e.g. babcess or an active arteriosclerotic lesion). Variant integrin containt integrin polypeptides.

Conformation also be used to affect the bioavailability of a variant integrin polypeptide und to creat disorders associated with a berrant or unwanted integrin expression or activity, such as vascular
                                                              Disclosure; SEQ ID NO 7; 128pp; English.
as activation-dependent ligand.
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Sequence 198 AA;

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                                                                                                                   CPTYMDVVIVLDGSNSIYPWSEVQTFLRRLVGKLFIDPEQIQVGLVQYGESPVHEWSLGD 60
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                                                Gaps
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0
  Length 198;
Query Match 89.0%; Score 912; DB 8; Length 19
Best Local Similarity 100.0%; Pred. No. 2.1e-96;
Matches 176; Conservative 0; Mismatches 0; Indels
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Human integrin alpha subunit Alpha 11 variant A domain.
        AAU76863 standard; protein; 193 AA
                          (first entry)
                          21-MAY-2002
                 AAU76863;
    RESULT
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Human; integrin alpha subunit; A domain; Alpha 11; integrin beta subunit; A-like domain; inflammatory disorder; skeletal muscle injury; restenosis; ischaemia-reperfusion injury; immune complex; parasitic disease; mutant; antiinflammatory; vasotropic; antiparasitic; vulnerary; gene therapy; mutein.

Homo sapiens. Synthetic.

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/note= "Wild-type Ile substituted by any other amino
Location/Qualifiers
                           Misc-difference
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Human; integrin alpha subunit; A domain; Alpha 11; integrin beta subunit; Alike domain; inflammatory disorder; skeletal muscle injury; restenosis; schaemia-reperfusion injury; immune complex; parasitic disease; antiinflammatory; vasotropic; antiparasitic; vulnerary; gene therapy.

WO200209737-A1

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The invention relates to a high affinity integrin polypeptide comprising all or part of a variant integrin alpha subunit A domain or a variant integrin alpha subunit A domain. The polypeptide, preferably the collib alpha subunit A domain, where I at residue 320 have been replaced by CC GO A, F at residue 313 and A at residue 320 have been replaced by CC GO A, F at residue 313 and A at residue 320 have been replaced by CC GO A, F at residue 313 and A at residue 320 have been replaced by CC GO A tetermining if a test compound is a candidate compound for binding to CC bloom of the the polypeptide and determining if the test compound binds to the polypeptide and determining if the test compound binds CC to the polypeptide. The integrin subunits are useful for reducing skeletal muscle injury, for treating disorders caused by ischaemia.

CC reperfusion injury, immune complexes, restences and parasitic diseases, to purify variant integrin polypeptide ligands and as bait proteins in CC two-hybrid ont these paraint. Alpha 11 variant A domain. Note: This variant integrin alpha subunit Alpha 11 variant A domain. Note: This variant complexes integrin alpha subunit Alpha 11 variant has been derived from the wild-type protein shown in AAU76854
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Novel high affinity integrin polypeptide useful for treating restenosis and parasitic diseases, comprises all or part of variant integrin alpha subunit A domain or variant integrin beta subunit A-like domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CQTYMDIVIVLDGSNSIYPWVEVQHFLINILKKKFYIGPGQIQVGVVQYGEDVVHEFHLND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            23 CPTYMDVVIVLDGSNSIYPWSEVQTFLRRLVGKLFIDPEQIQVGLVQYGESPVHEWSLGD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  83 FRIKEEVVRAAKNLSRREGRETKTAQAIMVACTEGFSQSHGGRPEAARLLVVVTDGESHD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       143 GEELPAALKACEAGRVTRYGIAVLGHYLRRQRDPSSFLREIRTIASDPDERFFFNV 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SPDLEKVIQOSERDNVTRYAVAVLGYYNRRGINPETFLNEIKYIASDPDDKHFFNV 174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       48.0%; Score 492; DB 5; Length 193; 54.5%; Pred. No. 6.4e-48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human integrin alpha subunit Alpha 11 A domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      31; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 57; Page; 55pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity 54.5%
nes 96; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 193 AA;
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Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  à
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Novel variant integrin CD11b alpha subunit polypeptide, useful for determining candidate compound for binding to CD11b, and for determining compound as activation-dependent ligand.
                                                                         /note= "Invariant Ile residue"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Disclosure; SEQ ID NO 8; 128pp; English.
 Location/Qualifiers
                                    /label = A domain
                                                                                                                                                                                                                            10-MAY-2002; 2002US-00144259.
                                                                                                                                                                                      12-MAY-2003; 2003WO-US014919
                                                                                                                                                                                                                                                                                                    Xiong J;
                                                                                                                                                                                                                                                             (GEHO ) GEN HOSPITAL CORP.
                                                                                                                                                                                                                                                                                                  Li R,
                                                                                                                                                                                                                                                                                                                                         WPI; 2004-593980/57
                                                                                                                                                                                                                                                                                                                                                            GENBANK; NP 036343.
                                                      Misc-difference 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 196 AA;
                                                                                                              402004066914-A2
                                                                                                                                                                                                                                                                                                    Arnaout MA,
                                                                                                                                                   12-AUG-2004
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                   Domain
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                                                                                                                                                                                                                                                                                                                                                                                                                                          The invention relates to a high affinity integrin polypeptide comprising all or part of a variant integrin alpha subunit A domain or a variant integrin beta subunit A-life domain. The polypeptide, preferably the coll be alpha subunit A domain, where I at residue 312 has been replaced by G or A, F at residue 313 and A at residue 320 have been replaced by C, or V at residue 315 and A at residue 320 have been replaced by C, or Or C determining if a test compound is a candidate compound for binding to compound with the polypeptide and determining if the test compound binds to the polypeptide. The integrin subunits are useful for reducing skeletal muscle injury, for treating disorders caused by ischaemian reperfusion injury, immune complexes, restenosis and parasitic diseases, to purify variant integrin polypeptide ligands and as bait proteins in two-hybrid or three-hybrid assays. This sequence represents the human integrin alpha subunit Alpha 11 A domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            83 FRIKEEVVRAAKNLSRREGRETKTAQAIMVACTEGFSQSHGGRPEAARLLVVVTDGESHD 142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CQTYMDIVIVLDGSNSIXPWVEVQHFLINILKKFYIGPGQIQVGVVQYGEDVVHEFHLND 60
                                                                                                                                                                                                                                                                                                                                   Novel high affinity integrin polypeptide useful for treating restenosis and parasitic diseases, comprises all or part of variant integrin alpha subunit A domain or variant integrin beta subunit A-like domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 23 CPTYMDVVIVLDGSNSIYPWSEVQTFLRRLVGKLFIDPEQIQVGLVQYGESPVHEWSLGD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                143 GEELPAALKACEAGRVTRYGIAVLGHYLRRQRDPSSFLREIRTIASDPDERFFFNV 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         48.0%; Score 492; DB 5; Length 193;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            47; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pred. No. 6.4e-48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            31; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human integrin alpha 11 subunit A domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADR23228 standard; protein; 196 AA
                                                                                                                                                                                                                                                                                                                                                                                                               Example 2; Fig 5; 55pp; English
                                                                                                                                             31-JUL-2000; 2000US-0221950P.
11-JAN-2001; 2001US-00758493.
13-MAR-2001; 2001US-00805354.
                                                                                                          31-JUL-2001; 2001WO-US023957
                                                                                                                                                                                                                                                             Arnaout AM, Li R, Xiong J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          54.5%;
                                                                                                                                                                                                                        (GEHO ) GEN HOSPITAL CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            96; Conservative
                                                                                                                                                                                                                                                                                                  WPI; 2002-188687/24.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 193 AA;
                                WO200209737-A1
Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      04-NOV-2004
                                                                       07-FEB-2002
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The present sequence is that of the human integrin alpha 11 subunit A domain. This includes an invariant Ile residue. The invention features covariant integrin alpha subunit polypeptides in which the invariant Ile is substituted by Gly, Ala or some other amino acid (e.g. Val) or is calested. The polypeptide can include part or all of the A domain. Comparing the invariant Ile creates a variant integrin polypeptide that is solution has a greater proportion of Ilgand. Comming polypeptides than the wild-type form of the subunit. Variant integrin polypeptides of the invention are useful in assays for compounds that integrin polypeptides of the invention are useful in assays for compounds that bind to a variant ligand, that interfere with or enhance the binding of an integrin ligand to integrin, and for identifying activation. Specific ligands. They are also useful for generating antibodies, e.g. concolonal antibodies, which bind to the high efficiency form of an integrin some such antibodies recognise an epitope that is either not present or not accessible on an integrin that is in a lower affinity of present or not accessible on an integrin that is an alower affinity conformation. The invention also provides methods of administering a variant integrin polypeptide, or an antibody that selectivity binds it, to identify a ligand which binds to an active integrin scheases or an active antegrin scheases or an active antegrin collection also be used to affect the bioavallability of a variant integrin polypeptide ligand and to treat disorders associated with a schear also.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FRIKEEVVRAAKNLSRREGRETKTAQAIMVACTEGFSQSHGGRPEAARLLVVVTDGESHD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CPTYMDVVIVLDGSNSIYPWSEVQTFLRRLVGKLFIDPRQIQVGLVQYGESPVHEWSLGD
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Best Local Similarity 54.5%; Pred. No. 6.5e-48;
Matches 96; Conservative 31; Mismatches 47; Indels
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ADR23225 RESULT

Homo sapiens

ADR23228
IID ADR.
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AC ADR.
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DT 04-1
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HUMM
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FRIKEEVVRAAKNLSRREGRETKTAQAIMVACTEGFSQSHGGRPEAARLLVVVTDGESHD 142

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Novel variant integrin CD11b alpha subunit polypeptide, useful for determining candidate compound for binding to CD11b, and for determining compound as activation-dependent ligand.
                                                         Human; integrin; CD49a; inflammation; antiinflammatory; vasotropic.
                                                                                                                    /note= "Invariant Ile residue"
                                          Human integrin CD49a alpha subunit A domain.
                                                                                                                                                                                                                                                                            Disclosure; SEQ ID NO 5; 128pp; English.
                                                                                       Location/Qualifiers
Z
                                                                                              1. .195
/label = A_domain
ADR23225 standard; protein; 198
                                                                                                                                                                12-MAY-2003; 2003WO-US014919
                                                                                                                                                                               10-MAY-2002; 2002US-00144259
                                                                                                                                                                                                             Xiong J;
                            (first entry)
                                                                                                                                                                                             (GEHO ) GEN HOSPITAL CORP.
                                                                                                                                                                                                                           WPI; 2004-593980/57
                                                                                                            Misc-difference 193
                                                                                                                                                                                                             Li R,
                                                                                                                                                                                                                                    GENBANK; P56199.
                                                                                                                                  WO2004066914-A2
                            04-NOV-2004
                                                                         Homo sapiens
                                                                                                                                                                                                             Arnaout MA,
                                                                                                                                                  12-AUG-2004.
              ADR23225;
                                                                                              Domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      injury
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The present sequence is that of the human integrin alpha subunit CD49a A domain. This includes an invariant Ile residue. The invention features variant integrin alpha subunit polypeptides in which the invariant Ile is substituted by Gly, Ala or some other amino acid (e.g. val) or is deleted. The polypeptide can include part or all of the A domain. Replacing the invariant Ile creates a variant integrin polypeptide that is solution has a greater proportion of Ilgand. Corming polypeptides) than the wild-type form of the subunit. Variant integrin polypeptides of the invention are useful in assays for compounds that bind to a variant ligand to integrin, and for identifying activation-constitution in the subunit. Variant of an integrin ligand to integrin, and for identifying activation-conscional antibodies, which bind to the high efficiency form of an integrin some such antibodies recognise an epitope that is either not present or not accessible on an integrin that is in a lower affinity conformation. The invention also provides methods of administering a variant integrin polypeptide, or an antibody that selectivity binds it, to identify a ligand which binds to an active integrin. Such assays are useful for diagnosing inflammation, e.g. occult inflammation (e.g. albecess or an active integrin integrin integrin polypeptide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     polypeptides can also be used to affect the bioavailability of a variant integrin polypeptide ligand and to treat disorders associated with aberrant or unwanted integrin expression or activity, such as vascular
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                                                                          CPTYMDVVIVLDGSNSIYPWSEVQTFLRRLVGKLFIDPEQIQVGLVQYGESPVHEWSLGD 82
                                                                                               Gaps
                                       .;
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41.7%; Score 427; DB 8; Length 198; 46.6%; Pred. No. 2.1e-40; ive 33; Mismatches 61; Indels
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Best Local Similarity 46.63 Matches 82; Conservative

Query Match

23

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Sequence 198 AA;

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Human; very late activation antigen; VLA-1; betal containing integrin; immunological disorder; inflammatory disorder; skin related condition; psoriasis; eczema; burn; dermatitis; respiratory distress syndrome; fibrosis; allergic rhinitis; asthma; bronchitis; tendonitis; bursitis; fever; migraine headachs; inflammatory bowel disease; Crohn's disease; irritable bowel syndrome; colitis; colorectal cancer; vascular disease; atterosclerosis; thyroiditis; apsatic anaemia; periarteritis nodosa; gastritis; Hodgkin's disease; rheumatic fever; autoimmune disease; osteoarthritis; type I diabetes; myasthenia gravis; rheumatoid arthritis; systemic lupus erythematosus; multiple solerosis; nephrotic syndrome; and processed to the contract of the contract 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   to very late activation (VLA-1; betal containing integrins) antigens and methods of using these antibodies to treat immunological disorders. The antibodies are useful for preventing or treating VLA-1 mediated immunological or inflammatory disorders such as skin related conditions (e.g. psoriasis, eczema, burns, dermatitis and abnormal proliferation of hair follicle cells), fibrosis (e.g. kidney or lung fibrosis), allergic rhinitis, respiratory distress syndrome, asthma, bronchitis, tendonitis, bursitis, fever, migraine headaches, gastrogastritesitics, irritable bowel syndrome, colitis and colorectal cancer), vascular diseases (e.g. atherosclerosis), thyroiditis, aplastic anaemia,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       renal failure, sarcoidosis, Behcet's syndrome, gingivitis, polymyositis, hypersensitivity, graft rejection; transplant rejection; conjunctivitis, graft versus host disease, myocardial ischaemia, fusion protein; rat.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                specifically bind
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New anti-VLA-1 antibodies are useful for preventing or treating VLA-1-mediated immunological or inflammatory disorders, e.g. psoriasis, eczemaburns, dermatitis, and abnormal proliferation of hair follicle cells or
                                                                              143 GEELPAALKACEAGRVTRYGIAVLGHYLRRQRDPSSFLREIRTIASDPDERFFRNV 198
                                                                                                              present invention relates to novel antibodies that
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Rat-human alpha 1-I domain fusion protein, RdeltaH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Saldanha JW, Karpusas M;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Example 24; Page 93; 248pp; English.
                                                                                                                                                                                                                                                                                          AAE33535 standard; protein; 192 AA.
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06-JUL-2001; 2001US-0303689P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                     (revised)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2003-093009/08.
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02-APR-2003
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                                    autoimmune diseases (e.g. type I diabetes, myasthenia gravis, rheumatoid arthitis, systemic lupus erythematosus and multiple sclerosis), renal fallure, sarcoidosis, nephrotic syndrome, Behcet's syndrome, gingivitis, polymyositis, hypersensitivity (e.g. delayed type hypersensitivity or immediate hypersensitivity), graft and transplant rejections, graft versus host disease, conjunctivitis, swelling occurring after injury, myocardial ischaemia or endotoxin shock syndrome. The present sequence is rat-human alpha 1-I domain fusion protein, RdeltaH. This sequence is in the exemplification of the invention. (Updated on 23-OCT-2003 to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human; very late activation antigen; VLA-1; betal containing integrin; immunological disorder; inflammatory disorder; skin related condition; psoriasis; escame; burn; dermattitis; respiratory distress syndrome; fibrosis; allergic rhinitis; asthms; bronchitis; tendonitis; bursitis; fever; migraine headache; inflammatory bowel disease; Crohn; disease; irritable bowel syndrome; colitis; colorectal cancer; vascular disease; atherosclerosis; thyroiditis; aplastic anemai; periarteritis nodosa; gastritis; Hodgkin's disease; rheumatic fever; autoimmune disease; osteomathitis; type I diabetes; myasthenia gravis; rheumatoid arthritis; systemic lupus erythematosus; multiple sclerosis; nephrotic syndrome; renal failure; sarcoidosis; Behcet's syndrome; gingivitis; polymyositis; praft rejection; transplant rejection; conjunctivitis; graft versus host disease; myocardial ischaemia; alpha 1-I protein.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TQLDIVIVLDGSNSIXPWESVIAFLADLLKRMDIGPKQTQVGTVQYGENVTHEFNLNKYS 60
    periarteritis nodosa, Hodgkin's disease, rheumatic fever, osteoarthritis
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  41.4%; Score 424; DB 6; Length 192;
47.1%; Pred. No. 4.5e-40;
tive 33; Mismatches 59; Indels
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nes 82; Conservative
                                                                                                                                                                                                                                                                                                                                                        in the exemplification that the standardise OS field)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 192 AA;
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Matches
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11D AAB33537
11D AAB33537
XX AAB3
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New anti-VLA-1 antibodies are useful for preventing or treating VLA-1-

Karpusas M;

Saldanha JW,

Garber EA,

Lyne PD,

(BIOJ) BIOGEN INC.

WPI; 2003-093009/08

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The present invention relates to novel antibodies that specifically bind to very late activation (VIA-1; betal containing integrins) antigens and entowers late activation (VIA-1; betal containing integrins) antigens and entowers of unitaring these antibodies to treat immunological disporders. The antibodies are useful for preventing or treating VIA-1- conditions (e.g. psoriatis, cezema, burns, dermatitis and abnormal problems; allergic rhinitis, respiratory distress syndrome, asthma, contificial conditions (e.g. inflammatory bowel disease, Crohn's disease, contestinal conditions (e.g. inflammatory bowel disease, Crohn's disease, crohn's disease, cascular diseases (e.g. atherosaclerosis), thyroditis, aplastic anaemia, containtentis nodosa, Hodgkin's disease, rheumatic fever, osteoarthritis, autoimmune diseases (e.g. type I diabetes, myasthenia gravis, rheumatoid arthritis, systemic lupus erythematosus and multiple sclerosis), renal fallure, sarcoidosis, nephrotic syndrome, Behcet's syndrome, gingivitis, olymyositis, hypersensitivity (e.g. delayed type hypersensitivity), graft and transplant rejections, graft confinedate hypersensitivity, graft and transplant rejections, graft confinedate hypersensitivity, graft and transplant rejections, myaner injury, myocardial ischaemia or endotoxin shock syndrome. The present sequence is the man it is domain protein. This sequence is used in the exemplification of
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ed immunological or inflammatory disorders, e.g. psoriasis, eczemv dermatitis, and abnormal proliferation of hair follicle cells or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            25 TYMDVVIVLDGSNSIYPWSEVQTFLRRLVGKLFIDPEQIQVGLVQYGESPVHEWSLGDFR
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41.4%; Score 424; DB 6;
Best Local Similarity 47.1%; Pred. No. 4.5e-40;
Matches 82; Conservative 33; Mismatches 59;
                                                                                                            Example 24; Page 94; 248pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAE33536 standard; protein; 192 AA
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                                                      fibrosis.
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                                ourns,
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Human integrin alpha subunit Alpha 1 (CD49a) A domain.
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                                                                                                                                                                                                                                                                                                                                       The present invention relates to novel antibodies that specifically bind to very late activation (VLA-1; betal containing integrins) antigens and methods of using these antibodies to treat immunological disorders. The methods of using these antibodies to treat immunological disorders. The matival antibodies are useful for preventing or treating VLA-1- mediated immunological or inflammatory disorders such as skin related conditions (e.g. psoriasis, eczema, burns, dermatitis and abnormal proliferation of hair follicle cells) fibrosis (e.g. kidney or lung fibrosis), allergic rhinitis, respiratory distress syndrome, asthma, collications (e.g. inflammatory bowel disease, Crohn's disease, conchitis, tendonitis, persitis, fever, migraine headaches, gastro-intestinal conditions (e.g. inflammatory bowel disease, Crohn's disease, gastritis, irritable bowel syndrome, colitis and colorectal cancer), vascular diseases (e.g. exherosolerosis), thyroiditis, aplastic anaemia, cultimunun diseases (e.g. type I diabetes, myasthenia gravis, rheumatoid atthitis, systemic lugus erythematosus and multiple sclerosis), renal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      failure, sarcoidosis, nephrotic syndrome, Behcet's syndrome, gingivitis, polymyositis, hypersensitivity (e.g. delayed type hypersensitivity or immediate hypersensitivity), graft and transplant rejections, graft versus host disease, conjunctivitis, such shord disease, conjunctivitis, shock syndrome. The present sequence is ret 1-I domain protein. This sequence is used in the exemplification of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STEEVLVAANKIGRQGGLQTMTALGIDTARKEAFTEARGARGVKKWWVIVTDGESHDNY 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               85 TKEEVVRAAKNLSRREGRETKTAQAIMVACTEGFSQSHGGRPEAARLLVVVTDGESHDGE 144
                                                                                                                                                                                                                                     anti-VLA-1 antibodies are useful for preventing or treating VLA-1-iated immunological or inflammatory disorders, e.g. psoriasis, eczema, is, dermatitis, and abnormal proliferation of hair follicle cells or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    25 TYMDVVIVLDGSNSIYPWSEVQTFLRRLVGKLFIDPEQIQVGLVQYGESPVHEWSLGDFR 84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ELPAALKACEAGRVTRYGIAVLGHYLRRQRDPSSFLREIRTIASDPDERFFFNV 198
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        40.9%; Score 419; DB 6; Length 192;
46.6%; Pred. No. 1.7e-39;
ive 33; Mismatches 60; Indels
                                                                                                                                                                              Karpusas M;
                                                                                                                                                                                                                                                                                                               Example 24; Page 93-94; 248pp; English.
                                                                                                                                                                              Saldanha JW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAU76851 standard; protein; 195 AA
                                                                       12-APR-2002; 2002WO-US011521.
                                                                                                   13-APR-2001; 2001US-0283794P.
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                                                                                                                                                                            Lyne PD, Garber EA,
                                                                                                                                                                                                         WPI; 2003-093009/08.
                                                                                                                                                (BIOJ ) BIOGEN INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 192 AA;
              WO200283854-A2
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                                          24-OCT-2002
                                                                                                                                                                                                                                                                    burns, de
fibrosis.
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The invention relates to a high affinity integrin polypeptide comprising all or part of a variant integrin alpha subunit A domain or a variant integrin beta subunit A-like domain. The polypeptide, preferably the CD11b alpha subunit A-like domain. The polypeptide, preferably the CD11b alpha subunit A domain, where I at residue 332 has been replaced by G or A, F at residue 313 and A at residue 320 have been replaced by C, or V at residue 315 and A at residue 320 have been replaced by C, or Or V at residue 315 and A at residue 320 have been replaced by C, is useful for determining if a test compound is a candidate compound for binding to the polypeptide and determining if the test compound binds to the polypeptide and determining if the test compound binds to the polypeptide. The integrin subunits are useful for reducing skeletal muscle injury, for treating disorders caused by ischaemianter polypeptide injury, immune complexes, restenosis and parasitic diseases, to purify variant integrin polypeptide ligands and as bait proteins in two-hybrid or three-hybrid assays. This sequence represents the human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            142
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Human, integrin alpha subunit; A domain, CD49a, integrin beta subunit; A-like domain; inflammatory disorder; skeletal muscle injury; restenosis; ischaemia-reperfusion injury; immune complex; parasitic disease; Alpha 1; antiinflammatory; vasotropic; antiparasitic; vulnerary; gene therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Novel high affinity integrin polypeptide useful for treating restenosis and parasitic diseases, comprises all or part of variant integrin alpha subunit A domain or variant integrin beta subunit A-like domain.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 83 FRIKEEVVRAAKNLSRREGRETKTAQAIMVACTEGFSQSHGGRPEAARLLVVVTDGESHD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             23 CPTYMDVVIVLDGSNSIYPWSEVQTFLRRLVGKLFIDPEQIQVGLVQYGESPVHEWSLGD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    143 GEELPAALKACEAGRVTRYGIAVLGHYLRRQRDPSSFLREIRTIASDPDERFFFNV 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ..
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       integrin alpha subunit Alpha 1 (CD49a) A domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Example 2; Fig 5; 55pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAU76860 standard; protein; 195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          31-JUL-2000; 2000US-0221950P.
                                                                                                                                                                                                                                                                                                                                                                                                      31-JUL-2001; 2001WO-US023957
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        11-JAN-2001; 2001US-00758493
13-MAR-2001; 2001US-00805354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Xiong J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (GEHO ) GEN HOSPITAL CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2002-188687/24.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Li R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 195 AA;
                                                                                                                                                                                                                                                           WO200209737-A1.
                                                                                                                                                                                        Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mac
Local Sim
80;
                                                                                                                                                                                                                                                                                                                               07-FEB-2002
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121 NHRLKKVIQDCEDENLQRFSIAILGSYNRGNLSTEKFVEELKSIASEPTEKHFFNV 176

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all or part of a variant integrin alpha subunit A domain or a variant integrin beta subunit A-like domain. The polypeptide, preferably the integrin beta subunit A-like domain. The polypeptide, preferably the collb alpha subunit A-like domain. The polypeptide preferably the collb alpha subunit A-like domain. The polypeptide been replaced by C, or var residue 315 and A at residue 320 have been replaced by C, or or collb or for treating an inflammatory disorder, by contacting a test compound to the polypeptide and determining if the test compound binds to the polypeptide. The integrin subunits are useful for reducing skeletal muscle injury, immune complexes, restences caused by ischaemiance to purify variant integrin polypeptide ligands and parasitic diseases, to purify variant integrin polypeptide all seaves. This sequence represents a human two-hybrid or three-hybrid assays. This sequence represents a human contactin alpha subunit Alpha 1 (CD498) variant A domain. Note This
                                                          Human; integrin alpha subunit; A domain; CD49a; integrin beta subunit; A-like domain; inflammatory disorder; skeletal muscle injury; restenosis; 1schaemia-reperfusion injury; immune complex; parasitic disease; mutant; antiinflammatory; vasotropic; antiparasitic; vulnerary; gene therapy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The invention relates to a high affinity integrin polypeptide comprising
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Novel high affinity integrin polypeptide useful for treating restenosis and parasitic diseases, comprises all or part of variant integrin alpha subunit A domain or variant integrin beta subunit A-like domain.
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                                                                                                                                                                                                                                                                              /note= "Wild-type Ile substituted by any other amino
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sequence is not featured in the specification but has been
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                  Human integrin alpha subunit Alpha 1 (CD49a) variant A domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5; Length 195;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   62; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               derived from the wild-type protein shown in AAU76851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            40.7%; Score 417; DB 5 45.5%; Pred. No. 3e-39;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 34; Mismatches
                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 45; Page; 55pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                             31-JUL-2000; 2000US-0221950P.
11-JAN-2001; 2001US-00758493.
13-MAR-2001; 2001US-00805354.
                                                                                                                                                                                                                                                                                                                                                                                                                       31-JUL-2001; 2001WO-US023957.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Li R, Xiong J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (GEHO ) GEN HOSPITAL CORP.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
Matches 80; Conserval
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2002-188687/24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 195 AA;
                                                                                                                                         mutein; Alpha 1
                                                                                                                                                                                                                                                             Misc-difference
                                                                                                                                                                                                                                                                                                                                            WO200209737-A1
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                                                                                                                                                                                Bapiens
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                                                                                                                                                                                                   Synthetic.
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143 GEELPAALKACEAGRVIRYGIAVLGHYLRRORDPSSFLREIRTIASDPDERFFRNV 198

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CSTOLDIVIVLDGSNSIYPMDSVTAFLNDLLKRMDIGPKÖTQVGIVQYGENVTHEFNLNK 60

8 & 8

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23 CPTYMDVVIVLDGSNSIYPWSEVQTFLRRLVGKLFIDPEQIQVGLVQYGESPVHEWSLGD 82

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The present sequence is that of the human integrin alpha subunit CD49b A domain. This includes an invariant Ile residue. The invention features variant integrin alpha subunit polypeptides in which the invariant Ile is substituted by Gly, Ala or some other amino acid (e.g. Val) or is deleted. The polypeptide can include part or all of the A domain. Replacing the invariant Ile creates a variant integrin polypeptide that is solution has a greater proportion of Ilgand. Ferming polypeptides of the invention are useful in assays for compounds that bind to a variant ligand, that inteffere with or enhance the binding to fan integrin ligand to integrin, and for identifying activation. Specific ligands. They are also useful for generating antibodies, e.g. monoclonal antibodies which bind to the high efficiency form of an integrin. Some such antibodies recognise an epitope that is either not present or not accessible on an integrin that is in a lower affinity conformation. The invention also provides methods of administering a variant integrin polypeptide, or an antibody that selectivity binds it, to identify a ligand which binds to an active integrin. Such assays are useful for diagnosing inflammation, e.g. occult inflammation (e.g. abscess or an active arteriosclerotic lesion). Variant integrin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              polypeptide, useful for
to CD11b, and for determining
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       polypeptides can also be used to affect the bioavailability of a variant integrin polypeptide ligand and to treat disorders associated with aberrant or unwanted integrin expression or activity, such as vascular
                                                                                                                                                                                       Human; integrin; CD49b; inflammation; antiinflammatory; vasotropic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 399; DB 8; Length 198; Pred. No. 3.6e-37;
                                                                                                                                                                                                                                                                                                                                          /note= "Invariant Ile residue"
                                                                                                                                                    Human integrin CD49b alpha subunit A domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Novel variant integrin CD11b alpha subunit determining candidate compound for binding compound as activation-dependent ligand.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Disclosure; SEQ ID NO 6; 128pp; English
                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                 1. .195
/label = A_domain
                                     ADR23226 standard; protein; 198
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46.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       12-MAY-2003; 2003WO-US014919
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Xiong J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (GEHO ) GEN HOSPITAL CORP.
                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2004-593980/57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Li R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENBANK; NP 002194.
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                                                                                                                                                                                                                                                                                                                        Misc-difference
                                                                                                                                                                                                                                                                                                                                                                               WO2004066914-A2
                                                                                                                                                                                                                              Homo sapiens
                                                                                                               04-NOV-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Arnaout MA,
                                                                                                                                                                                                                                                                                                                                                                                                                    12-AUG-2004
                                                                        ADR23226;
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                                                                                                                                                                                                                                                                                     Domain
                   ADR23226
RESULT
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FRTKEEVVRAAKNLSRREGRETKTAQAIMVACTEGFSQSHGGRPEAARLLVVVTDGESHD

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The present sequence is the I domain of human integrin alpha-2. Ligand binding through I domains requires an intact metal ion-dependent adhesion site (MIDAS) motif. A MIDAS motif has been identified in the extracellular domain of a newly identified human anthrax toxin receptor (ATR). The invention provides ATR polypeptides (see ABPS4903.06) and polynucleotides (see ABPS4903.06) and knock-out animals. It also provides methods for identifying molecules that bind the ATR and which reduce the toxicity of anthrax toxin. A claimed method for treating anthrax in a human or animal involves administering an agent that inhibits binding between PA and ATR at a licvel effective to reduce the severity of anthrax. Suitable agents include ATR or a PA-binding fragment of ATR, a PA-binding polypeptide at least 80% identical to these, a fusion protein, a monoclonal or polyclonal antibody, a polysaccharide, a lipid or a nucleic acid
                                                                                                 FRIKEBVVRAAKNLSRREGRETKTAQAIMVACTEGFSQSHGGRPEAARLLVVVTDGESHD 142
                                                                                                                  agent that prevents or
treating human or non-
                                23 CPTYMDVVIVLDGSNSIYPWSEVQTFLRRLVGKLFIDPEQIQVGLVQYGESPVHEWSLGD
                                                                                                                                                                                     GEELPAALKACEAGRVTRYGIAVLGHYLRRQRDPSSFLREIRTIASDPDERFFFNV 198
     Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 38.3%; Score 393; DB 5; Length 198; Best Local Similarity 46.0%; Pred. No. 1.8e-36; Matches 81; Conservative 28; Mismatches 67; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                Anthrax; toxin; receptor; integrin; human; antibacterial.
   66; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Novel isolated polypeptide useful for identifying reduces effect of anthrax toxin on host cell, for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mogridge JS;
 29; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Disclosure; Page 31-32; 45pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Collier RJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  human animal suffering from anthrax.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (WISC ) WISCONSIN ALUMNI RES FOUND.
                                                                                                                                                                                                                                                                                  ABP54908 standard; protein; 198 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2000US-0251481P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 03-OCT-2001; 2001WO-US030941
                                                                                                                                                                                                                                                                                                                                                                                Integrin alpha-2 I domain.
   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Young JAT, Bradley KA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2002-713235/77.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO200246228-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   05-DEC-2000;
                                                                                                                                                                                                                                                                                                                                                 08-JAN-2003
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81;
                                                                                               83
                                                                                                                                                                                                                                                                                                                  ABP54908;
                                                                                                                                                                  143
 Matches
                                                                                                                                                                                                                                                   RESULT 14
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The invention relates to a high affinity integrin polypeptide comprising all or part of a variant integrin alpha subunit A domain or a variant integrin beta subunit A-like domain. The polypeptide, preferably the CD11b alpha subunit A domain, where I at residue 332 has been replaced by G or A, F at residue 313 and A at residue 320 have been replaced by C, or V at residue 315 and A at residue 320 have been replaced by C, or Got electmining If a test compound is a candidate compound for binding to CD11b or for treating an inflammatory disorder, by contacting a test compound with the polypeptide and determining If the test compound binds to the polypeptide. The integrin subunits are useful for reducing skeletal muscle injury, for treating disorders caused by ischaemia-reperfusion injury, immune complexes, restenosis and parasitic diseases, to purify variant integrin polypeptide ligands and as bait proteins in two-hybride or three-hybrid assays. This sequence represents the human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                   Human, integrin alpha subunit, A domain, CD49b; integrin beta subunit; A Like domain; inflammatory disorder; skeletal muscle injury; restenosis; ischaemia-reperfusion injury; immune complex; parasitic disease; Alpha 2; antiinflammatory; vasotropic; antiparasitic; vulnerary; gene therapy.
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                                                                                                                                                                          GSMLKAVIDQCNHDNILRFGIAVLGYLNRNALDTKNLIKEIKAIASIPTERYFFNV 176
                                                                                                                               143 GEELPAALKACEAGRVTRYGIAVLGHYLRRQRDPSSFLREIRTIASDPDERFFFNV 198
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human integrin alpha subunit Alpha 2 (CD49b) A domain.
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                                                                                                                                                                                                                                                                                                                                                                          AAU76852 standard; protein; 195
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11-JAN-2001; 2001US-00758493.
13-MAR-2001; 2001US-00805354.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  31-JUL-2000; 2000US-0221950P.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
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83 FRTKEEVVRAAKNISRREGRETKTAQAIMVACTEGFSQSHGGRPEAARLLVVVTDGESHD 142
1 CPSLIDVVVVCDESNSIYPWDAVKNFLEKFVQGLDIGPTKTQVGLIQYANNPRVVFNLNT 60
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	ID 120
=	GKSHD
<u>=</u>	MVVVT
:: —	RSATKV
=	ASGGRRSA
	KYAYS
 =	AIQYAR
	LINIE
_ <u>:</u>	SQYGGE
_	VATSQT
<u>:</u>	IKEEMI
::	61 YK

Search completed: April 6, 2005, 14:36:34 Job time : 180 secs

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Sequence 7, Appli
                                                                                                                                            April 6, 2005, 14:37:40; Search time 138 Seconds (without alignments) 476.344 Million cell updates/sec
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1 GICARVDASFQPQGSLAPTA......FLREIRTIASDPDERFFFNV 198
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| Cgn2_6/ptodata1/lpubpaa/US07_PUBCOMB.ppp:*
| Cgn2_6/ptodata1/lpubpaa/US06_PUBF PUB.pep:*
| Cgn2_6/ptodata1/lpubpaa/US06_PUBFOMB.pep:*
| Cgn2_6/ptodata1/lpubpaa/US06_PUBFOMB.pep:*
| Cgn2_6/ptodata1/lpubpaa/US08_PUBFOMB.pep:*
| Cgn2_6/ptodata1/lpubpaa/US10_PUBFOMB.pep:*
GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
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                                                                                                   - protein search, using sw model
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Maximum Match
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Match Length
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seq length: 198
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US-09-758-493-7
US-09-805-354-8
US-09-758-493-8
US-10-144-259-8
US-09-758-493-5
US-10-144-259-5
US-10-144-259-5
US-10-144-259-5
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US-10-144-832-61
US-10-474-832-61
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195 10 US-09-805-354-6 195 11 US-09-784-893-6 196 19 US-09-784-893-6 148 9 US-09-764-870-284 148 14 US-10-146-259-6 148 14 US-09-764-870-444 148 14 US-10-125-540-444 148 14 US-10-125-540-474 148 14 US-10-125-540-474 103 11 US-09-764-875-1193 103 14 US-10-125-540-472 104 19 US-09-764-875-1193 11 US-09-764-875-1193 11 US-09-764-875-1193 11 US-09-764-875-1193 11 US-09-764-875-1193 1180 15 US-10-146-863-31 1190 11 US-09-758-493-3 150 15 US-10-144-259-3 151 10 US-09-758-493-3 152 11 US-09-758-493-3 153 11 US-09-758-493-3 154 US-10-144-259-3 155 US-10-144-259-3 156 15 US-10-146-265-3 165 15 US-10-146-265-3 165 15 US-10-146-263-3 165 15 US-10-346-863-35 167 US-10-346-863-35 168 15 US-10-346-863-36 183 15 US-10-346-863-36 183 15 US-10-346-863-36 183 15 US-10-346-863-36 183 15 US-10-346-863-36 184 10 US-09-805-354-4	6	Sequence 6, Appii Sequence 6, Appli	284,	444	e 284	Sequence 444, App	472, A	o)	Sequence 472, App	Sequence 38, Appl	Seguence 79, Appl	43,	31,	o,	σ	6	30	13	40	8	'n	'n	'n	26	33	32,	36,	20,	41,	7	Sequence 4, Appli
	US-09-805-354	US-10-144-259-	9-764-870	9-764-870-4	US-10-125-540-28	US-10-125-540-44	-09-764-870-47	US-09-764-875-11	US-10-125-540-47	US-09-976-782-3	US-10-004-378A-7	US-10-346-863-4	US-10-346-863-	US-09-805-354-	US-09-758-493-	US-10-144-259-	US-10-346-863-3	US-10-080-334-1	US-10-346-863-4	US-10-004-378A-	US-09-805-354-	US-09-758-4	US-10-144-	US-10-074-978A-26	US-10-346-863-3	US-10-346-863-3	US-10-346-863-3	US-10-346-863-	US-10-346-863-	US-10-615-515	US-09-805-354-
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APPLICANT: ATGRACHANT.
APPLICANT: Li, Rui
TTTLE OF INVENTION: HIGH AFFINITY INTEGRIN POLYPEPTIDES AND USES THEREOF
FILE REFERENCE: 00786-53601
CURRENT APPLICATION NUMBER: US/09/805,354
CURRENT APPLICATION NUMBER: US 60/221,950
PRIOR FILING DATE: 2001-01-11
PRIOR FILING DATE: 2000-07-31
NUMBER OF SEQ ID NOS: 20
SOFTWARE: FASESEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 CPTYMDVVIVLDGSNSIYPWSEVQTFLRRLVGKLFIDPEQIQVGLVQYGESPVHEWSLGD
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89.0%; Score 912; DB 10; Length 195;
Best Local Similarity 100.0%; Pred. No. 2.1e-89;
Matches 176; Conservative 0; Mismatches 0; Indels
                Sequence 7, Application US/09805354 Publication No. US20030078375A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM: Homo sapiens
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US-09-805-354-7
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83 FRTKEEVVRAAKNLSRREGRETKTAQAIMVACTEGFSQSHGGRPEAARLLVVVVTDGESHD 142
                                                                                                       83 FRIKEEVVRAAKNLSRREGRETKTAQAIMVACTEGFSQSHGGRPEAARLLVVVTDGESHD 142
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                                  1 CPTYMDVVIVLDGSNSIYPWSEVQTFLRRLVGKKLFIDPEQIQVGLVQYGESPVHEWSLGD 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Li, Rui
APPLICANT: Li, Rui
APPLICANT: Xiong, Jian-Ping
TITLE OF INVENTION: HIGH APPINITY INTEGRIN POLYPEPTIDES AND USES THEREOF
FILE REFERENCE: 00786-536001
CURRENT APPLICATION NUMBER: US/09/805,354
CURRENT FILING DATE: 2002-06-04
PRIOR PILING DATE: 2000-06-04
PRIOR PLING DATE: 2001-01-11
PRIOR PLING DATE: 2001-01-11
PRIOR PLING DATE: 2000-07-31
NUMBER OF SEQ ID NOS: 20
SOFTWARE: PastSEQ for Windows Version 4.0
SEQ ID NO 8
LENGTH: 193
  CPTYMDVVIVLDGSNSIYPWSEVQTFLRRLVGKLFIDPEQIQVGLVQYGESPVHEWSLGD
                                                                                                                                                                                                         143 GEELPAALKACEAGRVTRYGIAVLGHYLRRQRDPSSFLREIRTIASDPDERFFFNV 198
                                                                                                                                                                                                                                   121 GEELPAALKACEAGRVTRYGIAVLGHYLRRQRDFSSFLREIRTIASDPDERFFFNV 176
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APPLICANT: Li, Rui
APPLICANT: Ling, Jian-Ping
APPLICANT: Ling, Jian-Ping
TITLE OF INVENTION: USES THEREOF
FILE REFRENCE: 00786-804001
CURRENT APPLICATION NUMBER: US/09/758,493
CURRENT PILING DATE: 2001-01-11
PRIOR PRILING DATE: 2000-07-31
NUMBER OF SEQ ID NOS: 20
SOFTWARE: FASELSEQ for Windows Version 4.0
SEQ ID NO 8
LENGTH: 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   48.0%; Score 492; DB 10; Length 193; larity 54.5%; Pred. No. 2.5e-44; Conservative 31; Mismatches 47; Indels ;
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; Sequence 8, Application US/09758493
; Publication No. US20040086935A1
; GENERAL INFORMATION:
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Publication No. US20030078375A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Arnaout, M. Amin
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US-09-805-354-8
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Best Local Similarity
Matches 96; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 FRIKEEVVRAAKNIJSRREGRETKTAQAIMVACTEGFSQSHGGRPEAARLLVVVTDGESHD 120
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                               121 GEELPAALKACEAGRVTRYGIAVLGHYLRRQRDPSSFLREIRTIASDPDERFFFNV 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                143 GEELPAALKACEAGRVTRYGIAVLGHYLRRQRDPSSFLREIRTIASDPDERFFFNV 198
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143 GEELPAALKACEAGRVTRYGIAVLGHYLRRORDPSSFLREIRTIASDPDERFFRW 198
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APPLICANT: Li, Rui
APPLICANT: Li, Rui
APPLICANT: Xiong, Jian-Ping
TITLE OF INVENTION: VARIANT INTEGRIN POLYPEPTIDES AND USES THEREOF
FILE REPERENCE: 00786-548001
CURRENT APPLICATION NUMBER: US/10/144,259
CURRENT FILING DATE: 2000-004
PRIOR APPLICATION NUMBER: US 60/758,493
PRIOR PILING DATE: 2001-01-11
PRIOR APPLICATION NUMBER: US 60/221,950
PRIOR PILING DATE: 2000-07-31
NUMBER OF SEQ ID NOS: 30
SOFTWARE: FASLSEQ for Windows Version 4.0
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APPLICANT: Li, Rui
APPLICANT: Li, Rui
APPLICANT: Li, Rui
TITLE OF INVENTION: HIGH APPLINITY INTEGRIN POLYPEPTIDES AND
TITLE OF INVENTION: USES THEREOF
FILE REPRENCE: 00786-804001
CURRENT APPLICATION NUMBER: US/09/758,493
CURRENT FILING DATE: 2001-01-11
PRIOR PILING DATE: 2000-07-31
NUMBER OF SEQ ID NOS: 20
SOFFWARE: PastSEQ for Windows Version 4.0
SEQ ID NO 7
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89.0%; Score 912; DB 11; Length 195;
Best Local Similarity 100.0%; Pred. No. 2.1e-89;
Matches 176; Conservative 0; Mismatches 0; Indels (
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89.0%; Score 912; DB 14; Length 195;
Best Local Similarity 100.0%; Pred. No. 2.1e-89;
Matches 176; Conservative 0; Mismatches 0; Indels
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// Publication No. US20030109691A1
// GENERAL INFORMATION:
                                                                                                                                                                            Sequence 7, Application US/09758493
Publication No. US20040086935A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ) ORGANISM: Homo sapiens
US-10-144-259-7
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ORGANISM: Homo sapiens
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SEQ ID NO 5
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APPLICANT: Li, Rui
APPLICANT: Li, Rui
APPLICANT: Xiong, Jian-Ping
TITLE OF INVENTION: HIGH AFFINITY INTEGRIN POLYPEPTIDES AND USES THEREOF
FILE REPERENCE: 00786-535001
CURRENT APPLICATION NUMBER: US/09/805,354
                                                                                                                                 23 CPTYMDVVIVLDGSNSIYPWSEVQTFLRRLVGKLFIDPEQIQVGLVQYGESPVHEWSLGD
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Publication No. US20030109691A1
GENERAL INFORMATION:
APPLICANT: Arnaout, M. Amin
APPLICANT: Li, Rui
APPLICANT: Xiong, Jian-Ping
TITLE OF INVENTION: VARIANT INTEGRIN POLYPEPTIDES AND USES THEREOF;
FILE REFERENCE: 00786-548001
CURRENT APPLICATION NUMBER: US/10/114,259
CURRENT APPLICATION NUMBER: US 09/758,493
PRIOR APPLICATION NUMBER: US 60/221,950
PRIOR PILING DATE: 2001-01-11
PRIOR PILING DATE: 2000-07-31
PRIOR PILING DATE: 2000-07-31
NUMBER OF SEQ ID NOS: 30
SOFTWARE: FabriseQ for Windows Version 4.0
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                                                    ch 48.0%; Score 492; DB 11; Length 193; 1 Similarity 54.5%; Pred. No. 2.5e-44; 96; Conservative 31; Mismatches 47; Indels ;
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; ORGANISM: Homo sapiens
US-09-758-493-8
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US-10-144-259-8
                                                                          Best Local Similarity
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US-09-805-354-5
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Best Local
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83 FRIKEEVVRAAKNLSRREGRETKTAQAIMVACTEGFSQSHGGRPEAARLLVVVTDGESHD 142
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Sequence 5, Application US/09758493;
Publication No. US20040086935A1;
Publication No. US20040086935A1;
GENERAL INFORMATION:
APPLICANT: Arnaout, M. Amin;
APPLICANT: Arnaout, M. High Arrivation TITLE OF INVENTION: USES THEREOF;
TITLE OF INVENTION: USES THEREOF;
TITLE OF INVENTION: USES THEREOF;
FILE REFERENCE: 00786-804001;
CURRENT APPLICATION NUMBER: US/09/758,493;
CURRENT FILING DATE: 2001-01-11;
PRIOR FILING DATE: 2000-07-31;
NUMBER OF SEQ ID NOS: 20
SOFTWARE: FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                              Length 195;
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41.7%; Score 427; DB 11;
Best Local Similarity 46.6%; Pred. No. 2.4e-37;
Matches 82; Conservative 33; Mismatches 61;
                                                                                                                                                                                                                                                                                                                       Query Match
41.7%; Score 427; DB 10;
Best Local Similarity 46.6%; Pred. No. 2.4e-37;
Matches 82; Conservative 33; Mismatches 61;
CURRENT FILING DATE: 2002-06-04

PRIOR APPLICATION NUMBER: US 09/758,493

PRIOR FILING DATE: 2001-01-11

PRIOR FILING DATE: 2000-07-31

NUMBER OF SEQ ID NOS: 20

SOFTWARE: FastSEQ for Windows Version 4.0

SEGO ID NO 5:

LENGTH: 195
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US-10-144-259-5
; Sequence 5, Application US/10144259
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CRGANISM: Homo sapiens
US-09-758-493-5
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US-09-805-354-5
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61 STEEVLVAANKIVQRGGRQTMTALGIDTARKEAFTEARGARRGVKKVMVIVTDGESHDNY 120
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                                                  145 BLPAALKACEAGRVTRYGIAVLGHYLRRQRDPSSFLREIRTIASDPDERFFFNV 198
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                                                                                   121 RLKQVIQDCEDENIQRFSIAILGHYNRGNLSTEKFVEEIKSIASEPTEKHFFNV 174
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                                                                                                                                                                                                                              Sequence 61, Application US/10474832
Publication No. US20040081651A1
GENERAL INPORMATION:
GENERAL INPORMATION:
TITLE OF INVENTION: ANTIBODIES TO VLA-1
FILE REFERENCE: Alol PCT
CURRENT APPLICATION NUMBER: US/10/474,832
CURRENT FILING DATE: 2003-10-14
PRIOR APPLICATION NUMBER: 60/283,794
PRIOR PRILING DATE: 2001-07-06
NUMBER OF SEQ ID NOS: 70
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 61
LENGTH: 192
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JOS-10-346-863-36

PUBLICATION NO. UG20040038325A1

GENERAL INFORMATION:

APPLICANT: PHELPS, CHRISTOPHER BENJAMIN

APPLICANT: FAGAN, RICHARD JOSEPH

APPLICANT: FAGAN, RICHARD JOSEPH

APPLICANT: GUTTERINGE, ALEX

TITLE OF INVENTION: ADHESION MOLECULES

FILE REFERENCE: 674575-2001

CURRENT APPLICATION NUMBER: US/10/346,863

CURRENT APPLICATION NUMBER: PCT/6801/0318

PRIOR PILING DATE: 2001-07-24

PRIOR FILING DATE: 2000-07-24

PRIOR FILING DATE: 2000-10-17

NUMBER OF SEQ ID NOS: 57

SOFTWARE: PATENTIN UNINER: 21

SEQ ID NO 57

TYPER: PATENTIN UNINER: 21

TYPER: PATENTIN UNINER: 21

SEQ ID NO 57

TYPER: PATENTIN UNINER: 21
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Matches 82; Conservative
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; ORGANISM: Homo sapiens
US-10-474-832-61
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US-10-346-863-57
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                GENERAL INFORMATION:
APPLICANT: Atnaout, M. Amin
APPLICANT: Li, Rui
APPLICANT: Variant INTEGRIN POLYPEPTIDES AND USES THEREOF
FILE REPERBERC: 0786-54801
CURRENT APPLICATION NUMBER: US/10/144,259
CURRENT FILING DATE: 2002-09-04
PRIOR PFLING DATE: 2001-01-11
PRIOR PFLING DATE: 2000-07-31
NUMBER: OF SEQ ID NOS: 30
SOFTWARE: PARLESQ for Windows Version 4.0
SEQ ID NO 5
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TITLE OF INVENTION: ANTIBODIES TO VLA-1
FILE REFERENCE: Alo1 PCT
CURRENT APPLICATION NUMBER: 06/283,794
PRIOR APPLICATION NUMBER: 60/283,794
PRIOR FILING DATE: 2001-04-13
PRIOR FILING DATE: 2001-04-13
PRIOR FILING DATE: 2001-07-06
NUMBER OF SEQ ID NOS: 70
SEQ ID NO 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 59, Application US/10474832
Publication No. US20040081651A1
GENERAL INFORMATION:
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ORGANISM: Artificial Sequence
Publication No. US20030109691A1
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Matches 82, Conservative
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ORGANISM: Homo sapiens
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Matches 82
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                                                                                                                                                                                                                                                                      Sequence 6, Application US/09805354
Fublication No. US20030078375A1
GENERAL INFORMATION:
APPLICANT: Arnaout, M. Amin
APPLICANT: Li, Rui
APPLICANTION: HIGH AFFINITY INTEGRIN POLYPEPTIDES AND USES THEREOF
FILE REFERENCE: 00786-536001
CURRENT APPLICATION NUMBER: US/09/805,354
PRIOR FILING DATE: 2001-01-11
PRIOR APPLICATION NUMBER: US 60/221,950
PRIOR APPLICATION NUMBER: US 60/221,950
NUMBER OF SEQ ID NOS: 20
NUMBER OF SEQ ID NOS: 20
SOFTWARE: FASECEO for Windows Version 4.0
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                                                                                                                              85 TKEEVVRAAKNLSRREGRETKTAQAIMVACTEGFSOSHGGRPEAARLLVVVTDGESHDGE 144
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                                                       25 TYMDVVIVLDGSNSIYPWSEVQTFLRRLVGKLFIDPEQIQVGLVQYGESPVHEWSLGDFR
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Best Local Similarity 46.6%; Pred. No. 1.7e-36;
Matches 81; Conservative 33; Mismatches 60; Indels
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TITLE OF INVENTION: ANTIBODIES TO VLA-1
FILE REFERENCE: ALOI PCT
CURRENT APPLICATION NUMBER: US/10/474,832
CURRENT FILING DATE: 2003-10-14
PRIOR APPLICATION NUMBER: 60/283,794
PRIOR PILING DATE: 2001-04-13
PRIOR FILING DATE: 2001-04-13
PRIOR FILING DATE: 2001-04-13
PRIOR FILING DATE: 2001-07-06
NUMBER: OF SEQ ID NOS: 70
SEQ ID NO 60
LENGTH: 192
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US-10-474-832-60
; Sequence 60, Application US/10474832; Publication No. US20040081651A1; GENERAL INFORMATION:
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; ORGANISM: Rattus sp.
US-10-474-832-60
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US-00-758-493-6

Sequence 6, Application US/09758493

Publication No. US2040086935A1

GENERAL INFORMATION:

APPLICANT: Arnaout, M. Amin

APPLICANT: Li, Rui

APPLICANT: Li, Rui

APPLICANT: Xiong, Jian-Ping

TITLE OF INVENTION: USES THEREOF

TITLE OF INVENTION: USES THEREOF
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Best Local Similarity 46.0%; Pred. No. 2.5e-34;
Matches 81; Conservative 29; Mismatches 66;
                                                                                                                                                             Query Match
38.9%; Score 399; DB 10;
Best Local Similarity 46.0%; Pred. No. 2.5e-34;
Matches 81; Conservative 29; Mismatches 66;
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CURRENT APPLICATION NUMBER: US/09/758,493
CURRENT FILING DATE: 2001-01-11
PRIOR APPLICATION NUMBER: US 60/221,950
PRIOR FILING DATE: 2000-07-31
NUMBER OF SEQ ID NOS: 20
SOFTWARE: FastSEQ for Windows Version 4.0
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Job time : 139 secs
; SEQ ID NO 6
; LENGTH: 195
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-805-354-6
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US-09-758-493-6
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10761, A
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Sequence 7, Appli
Sequence 7, Appli
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38, Appl
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                   GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd
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-09-252-991A-21325
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US-09-795-798-8
US-08-177-109A-61
US-08-463-682-1
US-08-463-682-1
US-09-513-999C-6277
US-09-522-991A-29795
US-09-902-540-10761
US-09-902-540-10761
US-08-462-128-38
US-09-902-540-9764
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US-08-177-109A-62
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Sequence 22, Appl
Sequence 12480, A
Sequence 683, App
Sequence 7548, App
Sequence 7548, App
Sequence 16942, A
Sequence 57892, A
Sequence 62180, A
Sequence 4391, App
Sequence 4391, App
Sequence 47915, Applemence 12498, Applemence 12498, Applemence 12498, Applemence 12498, Applemence 12498, Applemence 12498, Applemence 12386, Applemence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 15448
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25.4%; Pred. No. 3e-10;
tive 37; Mismatches 70; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATE M. Amin Arnaout
TITLE OF INVENTION: METHODS FOR IDENTIFYING INTEGRIN
TITLE OF INVENTION: ANTAGONISTS
NUMBER OF SEQUENCES: 78
CORRESPONDENCE ADDRESS:
ADDRESSE: Fish & Richardson P.C.
STRET: 225 Franklin Street
STRET: Boston
STATE: Wassachusetts
COUNTRY: U.S.A.
                                                                          US-09-640-211A-683
US-09-543-681A-7548
US-09-552-991A-16942
US-09-270-767-57892
US-09-270-767-57892
US-09-270-767-58950
US-09-270-767-58950
US-09-107-532A-4391
US-09-270-767-3498
US-09-270-767-32498
US-09-270-767-3180
US-09-270-767-3180
US-09-270-767-3180
US-09-513-9996-4813
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US-09-252-991A-32444
US-09-902-540-15448
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ZIP: 02110-2804
COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
COMPUTER: IBM PS/2 Model 50Z or 55SX
COMPUTER: IBM PS/2 Model 50Z or 55SX
COMPUTER: IBM PS/2 Model 50Z or 55SX
OPERATING SYSTEM: MS-DOS (Version 5.0)
SOFTWARE: WordPerfect (Version 5.1)
CURRENT APPLICATION NUMBER: PCT/US96/01314
FILING DATE: 30-JAN-95
PRIOR APPLICATION NUMBER: 08/380,167
FILING DATE: 30-JAN-95
ATTORNEY/AGENT INFORMATION:
NAME: JOHN W. Freeman
NAME: JOHN W. FREEMAN
TELECHMUNICATION NUMBER: 00786/267001
TELECHMUNICATION INFORMATION:
TELECHMUNICATION INFORMATION:
TELEFRAX: (617) 542-8906
TELEFRAX: (617) 542-8906
TELEFRAX: (617) 542-8906
TELEFRAX: CONSTANT OR SEQ ID NO: 61:
SEQUENCE CHARARTERISTICS:
FUNCTIVE 181 amino acides
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Best Local Similarity 25.4*
Matches 44; Conservative
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GENERAL INFORMATION:
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                                       64 XWKDPDALLKHVKHWLLL----TNTFGAINYVATEVFREELGARPDATKVLIIITDGEAT 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      62 KRKDPDALLKHVKHMLLL----TNTFGAINYVATEVFREELGARPDATKVLIIITDGEAT 117
                 84 --RTKEEVVRAAKNLSRREGRETKTAQAIMVACTEGFSQSHGGRPEAARLLVVVTDGESH 141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              84 --RTKEEVVRAAKNLSRREGRETKTAQAIMVACTEGFSQSHGGRPEAARLLVVVTDGESH 141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  27 MDVVIVLDGSNSIYP--WSEVQTFLRRLVGKLFIDPEQIQVGLVQYGESPVHEWSLGDF- 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4 VDLVFLFDGSMSLQPDBFQKILDFMKDVMKKL--SNTSYQFAAVQFSTSYKTEFDFSDVV 61
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    142 DGEELPAALKACEAGRVTRYGIAVLGHYLRRORDPSSFLREIRTIASDPDERF 194
                                                                                                                               120 DSGNIDAAKD-----IIRYIIGIGKHPQTKESQET-----LHKFASKPASEF 161
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25.4%; Pred. No. 3.1e-10;
tive 37; Mismatches 70; Indels
                                                                                                                                                                                                                   ZIP: 94080

COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 inch, 1.44 Mb floppy disk
COMPUTER: 1BM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: WINDEATIN (Genetech)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/974,899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CLASSIFICATION: 536
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 60/031971
FILING DATE: 11/27/96
ATTORNEY/ACENT INFORMATION:
NAME: Lee, Wendy M.
REGISTRATION NUMBER: 91014R1
TELECOMMUNICATION INFORMATION:
TELEPHONE: 650/25-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity 25.4%
Matches 44; Conservative
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US-09-795-798-7
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; Sequence 7, Application US/09795798; ; Patent No. 6703018

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62 KRKDPDALLKHVKHMILL----TNTPGAINYVATEVPREELGARPDATKVLIIITDGEAT 117
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4 VDLVFLFDGSMSLQPDBFQXILDFMKDVMKKL--SNTSYQFAAVQFSTSYKTEFDFSDVV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     27 MDVVIVLDGSNSIYP--WSEVQTFLRRLVGKLFIDPEQIQVGLVQYGESPVHEWSLGDF-
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Fatent No. 5869615

GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT:
APPLICANT:
Dennis B. Hourcade and Teresa J. Oglesby
TITLE OF INVENTION:
MUMBER OF SEQUENCES:
COMPLEMENT PROTEASES

ADDRESSEE:
ADDRESSEE:
STREET: 2800 One Atlantic Center
STREET: 2800 One Atlantic Center
STREET: 1201 West Peachtree Street
CITY: Atlanta
COUNTRY: USA

COUNTRY: USA

COMPUTER READABLE FORM:
                    Jardieu, Paula M.

Jardieu, Paula M.

NUMBER OF INVENTION: Humanized Anti-CD11a Antibodies
NUMBER OF SEQUENCES: 24
CORRESPONDENCE ADDRESS:
ADDRESSEE: Genentech, Inc.
STREET: 1 DNA WAY
                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 inch, 1.44 Mb floppy disk
COMPUTER: 1BM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Winheatin (Genentech)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/795,798
FILING DATE: S8-Peb-2001
CLASSIFICATION AURHOMMAN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   14.4%; Score 148; DB 4; ilarity 25.4%; Pred. No. 3.1e-10; Conservative 37; Mismatches 70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE/DOCKET NUMBER: P1014R1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 08/974,899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TOPOLOGY: Linear
SEQUENCE DESCRIPTION: SEQ ID NO: 7:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REGISTRATION NUMBER: 40,378
                                                                                                                                                                CITY: South San Francisco
STATE: California
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELECOMMUNICATION INFORMATION:
TELEPHONE: 650/225-1994
TELEPAX: 650/952-9881
INFORMATION FOR SEQ ID NO: 7:
SEQUENCE CHARACTERISTICS:
APPLICANT: Presta, Leonard G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LENGTH: 184 amino acids
TYPE: Amino Acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: <Unknown>
ATTORNEY/AGENT INFORMATION:
NAME: Lee, Wendy M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-08-177-109A-62
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PCT-US96-01314-60
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                140 SH-DGEELPAALKACEAGRVTRYGIAVLGHYLRRQRDPSSFLREIRTIASDPDERFFFNV 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    118 KEGDSLDYKDVIPMADAAGIIRYAIGVGLAFONR----NSWKELNDIASKPSOEHIFKV 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           23 CPTY-MDVVIVLDGSNSIYP--WSEVQTFLRRLVGKLFIDPEQIQVGLVQYGESPVHEWS 79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ch 14.3%; Score 147; DB 2; Length 187;
1. Similarity 26.7%; Pred. No. 4.2e-10;
48; Conservative 36; Mismatches 84; Indels 12; Gaps
                                                                                                                          CURRENT APPLICATION DATA:

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/177,109A

FILING DATE: 03-JAN-1994

CLASSIFICATION: 514

ATTORNEY/AGENT INFORMATION:

NAME: Pabet, Patrea L.

REGISTRATION NUMBER: 31,284

RELEPHONE: (404) 873-8794

TELEFONMICATION INFORMATION:

TELEFONMICATION OF 62:

SEQUENCE CHARACTERISTICS:

LENGTH: 137 amino acids

TYPE: amino acid

TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 62, Application US/08687706
Patent No. 5928892
GENERAL INFORMATION:
APPLICANT: Dennis E. Hourcade and Teresa J. Oglesby
TITLE OF INVENTION: MODIFIED COMPLEMENT PROTEASES
NUMBER OF SEQUENCES: 62
CORRESPONDENCE ADDRESS:
ADDRESSEE: Patrea L. Pabst
STREET: 2800 One Atlantic Center
STREET: 1201 West Peachtree Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/687,706
FILING DATE: 26-UUL-1996
CLASSIFICATION 514
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/177,109
FILING DATE: 03-JAN-1994
CLASSIFICATION: 514
ATTONEY/AGENT INFORMATION:
NAME: Pabst, Patrea L.
REGISTRATION NUMBER: 31,284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CITY: Atlanta
STATE: Georgia
COUNTRY: USA
ZIP: 30309-3450
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTE
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MOLECULE TYPE: protein HYPOTHETICAL: NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-08-177-109A-62
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80 LGDFRTKEEVVRAAKNLSRREGRETKTAQAIMVACTEGFSQSHGGRPEAARLLVVVTDGE 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           59 FEEFRRTSNPLSLLASVHQLQG-FTYTATAIQNVVHRLFHASYGARDATKILIVITDGK 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           40 SH-DGEELPAALKACEAGRVTRYGIAVLGHYLRRQRDPSSFLREIRTIASDPDERFFFNV 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        118 KEGDSLDYKDVIPMADAAGIIRYAIGVGLAFQNR-----NSWKELNDIASKPSQEHIFKV 172
                                                                                                                                                                                                                                                                                                                                                                                               23 CPTY-MDVVIVLDGSNSIYP--WSEVQTFLRRLVGKLFIDPEQIQVGLVQYGESPVHEWS
                                                                                                                                                                                                                                                                                                                              84; Indels 12;
                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 26.7%; Pred. No. 4.2e-10;
Matches 48; Conservative 36; Mismatches 84; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
COMPUTER: IBM PS/2 Model 50Z or 55SX
OPERATING SYSTEM: MS-DOS (Version 5.0)
SOFTWARE: WORDPERFECT (Version 5.1)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US96/01314
FILING DATE: 30-JAN-96
PRIOR APPLICATION NUMBER: 08/380,167
FILING DATE: 30-JAN-95
ATTORNEY/AGENT INFORMATION:
NAME: JOHN W. Freeman
REGISTRATION NUMBER: 29,066
REFERENCE/DOCKET NUMBER: 29,066
REFERENCE/DOCKET NUMBER: 00786/267001
TELECOMMUNICATION INFORMATION:
REFERENCE/DOCKET NUMBER: WU 107 DIV
TELECOMMUNICATION INFORMATION:
TELEPHONE: (404) 873-8794
TELEFAX: (404) 873-8795
INFORMATION FOR SEQ ID NO: 62:
SEQUENCE CHARACTERISTICS:
LENGTH: 187 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELEPHONE: (617) 542-5070 TELEFAX: (617) 542-8906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEX: 200154
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                           MOLECULE TYPE: protein
HYPOTHETICAL: NO
US-08-687-706-62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: amino acid STRANDEDNESS:
                                                                                                                                                                                  linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COUNTRY: U.S.A.
ZIP: 02110-2804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PCT-US96-01314-60
                                                                                                                                                                           TOPOLOGY:
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62 KQKDPDALLEHVKHMLLL----TNTFGAINYVATEVPREELGARPDATKVLIIITDGEAT 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             --RTKEEVVRAAKNLSRREGRETKTAQAIMVACTEGFSQSHGGRPBAARLLVVVTDGESH 141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4 VDLIFLFDGSMSLQPDEFQKILDFMKDVMKKL--SNTSYQFAAVQFSTSYKTEFDFSDYV 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       27 MDVVIVLDGSNSIYP--WSEVQTFLRRLVGKLFIDPEQIQVGLVQYGESPVHEWSLGDF-
    118 DSGNIDAAKD-----IIRYIIGIGKHFQTKESQET-----LHKFASKPASEF 159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 142 DGEELPAALKACEAGRVTRYGIAVLGHYLRRQRDPSSFLREIRTIASDPDERF 194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | : | : : : : : | | | DAGNIDAAKD-----IRYIIGIGKHPQTKESQET-----LHKFASKPASEF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                        Jardieu, Paula M.
TITLE OF INVENTION: Humanized Anti-CD11a Antibodies
NUMBER OF SEQUENCES: 24
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 inch, 1.44 Mb floppy disk COMPUTER: BM PC compatible
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Windratin (Genentech)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/795,798
FILING DATE: 28-Peb-2001
CLASSIFICATION AUKNOWN.
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 61, Application US/08177109A
Patent No. 5865615
GENERAL INFORMATION:
TITLE OF INVENTION: MODIFIED COMPLEMENT PROTEASES
NUMBER OF SEQUENCES:
CORRESPONSECE ADDRESS:
ADDRESSEE: Patrea L. Pabst
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              14.1%; Score 145; DB 4; 24.9%; Pred. No. 7.4e-10; tive 37; Mismatches 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE/DOCKET NUMBER: P1014R1
TELECOMMUNICATION INFORMATION:
TELEPHONE: 650/225-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 08/974,899
FILING DATE: «Unknown»
ATTORNEY/AGENT INFORMATION:
NAME: Lee, Wendy M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGY: Linear
SEQUENCE DESCRIPTION: SEQ ID NO: 8:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REGISTRATION NUMBER: 40,378
                                                                                                                                                                                                                                                                                               ADDRESSEE: Genentech, Inc.
STREET: 1 DNA Way
CITY: South San Francisco
STATE: California
                                                                                                                                                                                 APPLICANT: Presta, Leonard G.
                                                                                                                ; Sequence 8, Application US/09795798; Patent No. 6703018; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH: 184 amino acids
TYPE: Amino Acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INFORMATION FOR SEQ ID NO: 8: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
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Best Local Similarity
Matches 43; Conserva'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-08-177-109A-61
                                                                      RESULT 8
US-09-795-798-8
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                                                                                                                                                                                 80 LGDFRTKEEVVRAAKNLSRREGRETKTAQAIMVACTEGFSQSHGGRPEAARLLVVVTDGE 139
                                                                                                                                                                                                                                                                     140 SH-DGEELPAALKACEAGRVTRYGIAVLGHYLRRQRDPSSFLREIRTIASDPDERFFFNV 198
                                                                                                                                                                                                                                                                                                      118 KEGDSLDYKDVIPMADAAGIIRYAIGVGLAFQNR----NSWKELNDIASKPSQEHIFKV 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     84 --RTKEEVVRAAKNLSRREGRETKTAQAIMVACTEGFSQSHGGRPEAARLLVVVTDGESH 141
                                                                                      23 CPTY-MDVVIVLDGSNSIYP--WSEVQTFLRRLVGKLFIDPEQIQVGLVQYGESPVHEWS 79
                                                                                                                       27 MDVVIVLDGSNSIYP--WSEVQTFLRRLVGKLFIDPEQIQVGLVQYGESPVHEWSLGDF- 83
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                                                 12;
14.3%; Score 147; DB 5; Length 187; 26.7%; Pred. No. 4.2e-10; ive 36; Mismatches 84; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 8, Application US/08974899
Patent No. 6037454
GENERAL INFORMATION:
APPLICANT: Jardieu, Leonard G.
APPLICANT: Jardieu, Paula M.
TITLE OF INVENTION: Humanized Anti-CD11a Antibodies
NUMBER OF SEQUENCES: 24
CORRESPONDENCE ADDRESS:
ADDRESSEE: Genentech, Inc.
STREET: 1 DNA WAY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      14.1%; Score 145; DB 3; 24.9%; Pred. No. 7.4e-10; ive 37; Mismatches 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ZIP: 94080
COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 inch, 1.44 Mb floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: WinPatin (Genericech)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/974,899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME: Lee, Wendy M.
REGISTRATION NUMBER: 40,378
REFERENCE/DOCKET NUMBER: P1014
TELECOMMUNICATION INPORMATION:
TELEPAX: 650/22-1994
TELEPAX: 650/952-9891
INPORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60/031971
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CLASSIFICATION: 536
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 60/031
FILING DATE: 11/27/96
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STREET: 1 DNA way
CITY: South San Francisco
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           184 amino acids
                                            48, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                43; Conservative
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Best Local Similarity
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                  Best Local Similarity
Matches 48; Conserv
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Query Match
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CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08
FILING DATE: 26-JUL-1996
                                           FILING DATE: 26
CLASSIFICATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  75 VHEWSLGDFRTKEEVVRAAKNLSRREGRETKTAQAIMVACTEGFSQSHGGRPEAARLLVV 134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     135 VTDGESHDGEELPAALKACEAGR--VTRYGIAVLGHYLRRQRDPSSFLREIRTIASDPDE 192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      23 CPTY-MDVVIVLDGSNSIYPWSEVQTFLRRLVGKLFIDP--EQIQ-----VGLVQYGESP 74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     24; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ch 14.0%; Score 144; DB 2; Length 187; l. Similarity 31.7%; Pred. No. 1e-09; 59; Conservative 26; Mismatches 77; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
APPLICANT: Dennis E. Hourcade and Teresa J. Oglesby
TITLE OF INVENTION: MODIFIED COMPLEMENT PROTEASES
NUMBER OF SEQUENCES: 62
CORRESPONDENCE ADDRESS:
ADDRESSEE: Patrea L. Pabst
STREET: 2800 One Atlantic Center
STREET: 1201 West Peachtree Street
                                                                                                                                                                                               SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/177,109A
FILING DATE: 03-JAN-1994
CLASSIFICATION: 514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Patentin Release #1.0, Version #1.25
2800 One Atlantic Center
1201 West Peachtree Street
                                                                                                                                                                                                                                                                                             ATTORNEY AGENT INFORMATION:
NAME: Pabet, Patrea L.
REGISTRATION NUMBER: 31,284
REFERENCE/DOCKET NUMBER: WU 107
TELECOMMUNICATION INFORMATION:
TELEPHONE: (404) 873-8794
INFORMATION FOR SEQ ID NO: 61:
SEQUENCE CHARACTERISTICS:
LENGTH: 187 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CITY: Atlanta
STATE: Georgia
CONTRY: USA
ZIP: 30309-3450
COMPUTER READABLE FORM:
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/NS-DOS
SOFTWARE: PatentIn Release #1.0, v
                                                                                                 ZIP: 30309-3450
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-08-687-706-61
; Sequence 61, Application US/08687706
; Patent No. 5928892
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            : protein
NO
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                                       Atlanta
Georgia
Y: USA
                                                                                               30309-3450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MOLECULE TYPE:
HYPOTHETICAL:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-08-177-109A-61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
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US-08-463-682-1

Sequence 1, Application US/08463682

Sequence 1, Application US/08463682

Sequence 1, Application US/08463682

Sequence 1, Application US/08463682

Patent No. 6008193

TITLE OF INVENTION: Cloning and Production of Human Von
TITLE OF INVENTION: Willebrand Factor GPIb Binding Domain Polypeptides and
TITLE OF INVENTION: Methods of Using Same
ITILE OF INVENTION: Methods of Using Same
CORRESPONDENCE ADDRESS:
ADDRESSEE: Cooper & Dunham
STREET: 1185 Avenue of Americas
CITY: New York
CUNTRY: New York
COUNTRY: New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      24; Gaps 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               135 VTDGESHDGEELPAALKACEAGR -- VTRYGIAVLGHYLRRQRDPSSFLREIRTIASDPDE 192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 CPQEDSDIAFLIDGSGSIIPHD----FRRM--KEFVSTVMEQLKKSKTLFSLMQYSEEF 53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           23 CPTY-MDVVIVLDGSNSIYPWSEVQTFLRRLVGKLFIDP--EQIQ-----VGLVQYGESP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 75 VHEWSLGDFRTKEEVVRAAKNLSRREGRETKTAQAIMVACTEGFSQSHGGRPEAARLLVV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match

14.0%; Score 144; DB 2; Length 187;
Best Local Similarity 31.7%; Pred. No. 1e-09;
Matches 59; Conservative 26; Mismatches 77; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PatentIn Release #1.0, Version #1.30
                                              CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION DATA:
FILING DATE: 03-0AN-1994
CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
NAME: Pabst, Patrea L.
REGISTRATION NUMBER: 31,284
REFERENCE/DOCKET NUMBER: 31,284
REFERENCE/DOCKET NUMBER: WU 107 DIV
TELECOMMINICATION INFORMATION:
TELECHONE: (404) 873-8794
INFORMATION FOR SEQ ID NO: 61:
SEQUENCE CHARACTERISTICS:
LENGTH: 187 amino acids
US/08/687,706
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/463,682
FILING DATE: 05-JUN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             :: Floppy disk
IBM PC compatible
YSTEM: PC-DOS/MS-DOS
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ATTORNEY/AGENT INFORMATION:
NAME: White, John P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MOLECULE TYPE: protein HYPOTHETICAL: NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER: IBM PC OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                       amino acid
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FEATURE:
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Sequence 6278
Sequence 6288
Sequence 7888
Sequence 778
Sequence 6277
Sequence 6277
Sequence 6277
Sequence 6277
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                             141 HDGEELPAALKACEAGRVTRYGIAVLGHYLRRQR------DPSSFLREIRTIASD-PD 191
                                                                                                                                                                                                                                                                                                                                                                               23 CPTYMDVVIVLDGSN--SIYPWSEVQTFLRRLVGKLFIDPEQIQVGLVQYGESPVHEWSL 80
                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
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                                                                                                                                                                                                                                                                                                      9.1%; Score 93; DB 3; Length 187; llarity 20.7%; Pred. No. 0.0029; Conservative 46; Mismatches 72; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              7.1%; Score 73; DB 4; Length 77;
40.0%; Pred. No. 0.25;
cive 9; Mismatches 15; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       103 ETKTAQAIMVACTEGFSQSHGGRPEAARLLVVVTDGESHD 142
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REFERENCE/DOCKET NUMBER: 36537-B2-Y
TELECOMMUNICATION INFORMATION:
TELEPAX: (212) 278-0400
TELEPAX: (212) 391-0525
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 187 amino acids
TYPE: amino acids
STRANDENESS: single
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; OTHER INFORMATION: XAA=Cys or Gly US-09-513-999C-6277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity 40.0 Matches 16, Conservative
                                                                                                                                                                                                          MOLECULE TYPE: peptide HYPOTHETICAL: NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
Matches 38; Conservat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    192 ERFF 195
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                                                                                                                                                                                                                                                 ; ANTI-SENSE: NO
US-08-463-682-1
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US-09-513-999C-6277
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Sequence 21325, Application US/09252991A
Patent No. 6551795
GENERAL INFORMATION:
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS
TITLE OF INVENTION: AERGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
FILE REFERENCE: 107196-1136
CURRENT FILING DATE: 1999-02-18
PRIOR APPLICATION NUMBER: US 60/074,788
PRIOR APPLICATION NUMBER: US 60/074,788
PRIOR PAPLICATION NUMBER: US 60/094,190
PRIOR PLING DATE: 1998-02-18
PRIOR PELING DATE: 1998-02-18
PRIOR PELING DATE: 1998-02-18
PRIOR FILING DATE: 1998-02-18
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           143 -----GEELPAALKA-----CEAGRVTRYGIAVLGHYLRRQRDPS----SFLREI 183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 VMANNEQKRDEGYIEKLVQVNRVAKT----VKGGRIFAFTALTVVGDGKGRVGFGRGKA 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                19 LVRVAPSLFLGSARAAGAEEQLARAGVTLCVNVSRQQPGPRAPGVAELRVPVFDDPAEDL 78
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6.7%; Score 69; DB 4; Length 176;
Best Local Similarity 28.0%; Pred. No. 2.9;
Matches 37; Conservative 17; Mismatches 50; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6.7%; Score 69; DB 4; Length 167; 38.7%; Pred. No. 2.7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
APPLICANT: Kapeller, Rosanna
TITLE OF INVENTION:
10448-018001
CURRENT APPLICATION NUMBER: US/09/704,139
CURRENT APPLICATION NUMBER: US 60/185,772
PRIOR APPLICATION NUMBER: US 60/185,772
PRIOR FILING DATE: 2000-02-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME/KEY: misc feature
LOCATION: (1). (1390)
OTHER INFORMATION: n = a, t, g, or c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 2, Application US/09704139 Patent No. 6420153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM: Pseudomonas aeruginosa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PatentIn version 3.0
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56 REVPAAIQKAMEAAR 70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 38.7%
Matches 29; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQ ID NOS:
SOFTWARE: Patentin v
IS-09-252-991A-21325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-252-991A-21325
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LENGTH: 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-704-139-2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: PRT
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Sequence 29795, Application US/09252991A

Sequence 29795, Application US/09252991A

Patent No. 6551795

GENERAL INFORMATION:
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS:
TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS

TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS

CURRENT APPLICATION NUMBER: US/09/252,991A

CURRENT PILING DATE: 1999-02-18

PRIOR APPLICATION NUMBER: US 60/074,788

PRIOR PILING DATE: 1998-02-18

PRIOR FILING DATE: 1998-02-18

PRIOR FILING DATE: 1998-07-27

NUMBER OF SEQ ID NOS: 33142

SEQ ID NO 29795

LENGTH: 177
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      107 AQAIMVACTEG----FSQSHGGRPEAARLLVVVTDGESHD----GEELPAALKACEAGRVT 159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             28 LPROGARPTPRGPLGGTPTIQPDTALLEQQGVLKKATARCAVQAGRGRGAAGPAGAPDRG 87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 6.7%; Score 68.5; DB 4; Length 177;
Best Local Similarity 24.0%; Pred. No. 3.4;
Matches 37; Conservative 14; Mismatches 62; Indels 41; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    160 RYGIAVLGHYLRRORDPSSFLREIRTIASDPDER 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      140 -----LAHQLRRRRAPALRVALLRQRQQPDHR 167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; TYPE: PRT; ORGANISM: Pseudomonas aeruginosa US-09-252-991A-29795
137 RPVA-EPNPGFW 147
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Search completed: April 6, 2005, 14:41:28 Job time : 49 secs

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GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
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OM protein - protein search, using sw model

April Run on:

6, 2005, 13:33:34 ; Search time 42 Seconds (without alignments) 80.181 Million cell updates/sec

US-09-647-544-2_COPY_952_986

1 YEVHPYGTLPVGPGPEFKTTLRVQNLGCYVVSGLI 35 Title: Perfect score: Sequence:

Scoring table:

BLOSUM62 Gapop 10.0 , Gapext 0.5

7756 Total number of hits satisfying chosen parameters:

283416 seqs, 96216763 residues

Searched:

Minimum DB seq length: 0 Maximum DB seq length: 35

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

*:6/ PIR Database :

1: pirl:* 2: pir2:* 3: pir2:* 4: pir4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

CITAMANDIO

Result	C	Query			SUMMARIES	
٠ ا	Score	Match	Length	8	ID	Description
н	37	19.3	35	~	PC2297	V3 domain peptide
8	36	•	26	7	805414	steryl-sulfatase (
m	35.5	٠	33	7	S13863	amide
4		•	33	7	D61563	neurophysin 1 - ch
S	35	18.2	35	~	A54257	deoxynucleoside ki
9	34.5		35	~	B36912	hypothetical prote
7			35	7	PC2295	V3 domain peptide
80		•	10	~	H60588	sperm-activating p
σ	33	17.2	30	~	169492	റ
10		٠	22	7	PQ0070	T-cell receptor be
11	32	16.7	30	7	874112	proline-rich antib
15		16.7	35	~	PC2296	V3 domain peptide
13	32	16.7	35	~	B41161	29K antigen PEB2 -
14	31.5	16.4	35	~	AD2525	hypothetical prote
15	31	16.1	19	N	S68394	H+-transporting tw
16	31	16.1	20	0	A36016	granulocyte inhibi
17	31	16.1	24	~	T42441	protein phosphatas
18	31	16.1	24	~	B30609	Ig kappa chain V-I
19	31	16.1	28	~	A31859	deoxycytidine kina
20	31	16.1	28	~	JN0366	proteinase inhibit
21	31	9	34	~	C31514	hemopexin - chicke
22	•		35	~	PC2294	V3 domain peptide
23	ö	15.9	35	~	S18264	(S) -6-hydroxynicot
24	30	•	18	~	C32537	J.
52	30	15.6	20	~	PL0161	hemagglutinin - In
56	30	•	22	N	D32537	'n
27	30	15.6	27	~	C54257	deoxynucleoside ki
58	30		28	~	ч	ubiquinol-cytochro
53	30	15.6	28	N	I48349	fibronectin - mous

hypothetical prote	hypothetical prote	V3 domain peptide	aldose 1-epimerase	cytochrome P450K-2	LX-1 tumor antigen	formin binding pro	transforming prote	V3 domain peptide	pepsin I (EC 3.4.2	Neb-colloostatin -	immunodeficiency v	aldose 1-epimerase	Ig kappa chain V-I		
A95047	H95019	PC2293	A24487	S08282	A39269	S64717	A34874	PC2298	A60507	S69153	865399	PU0033	H30608	836378	G30608
~	7	~	7	7	7	7	7	~	7	~	~	~	7	7	~
33	34	35	27	15	22	27	30	35	33	19	20	20	22	25	56
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15.6	15.	15	15	15	15	15.	15.	15.	14.	14.	14.	14.	4.	14	14
30 15.6	30 15.	30 15	29.5 15		29 15.		29 15.		28.5 14.	28 14.	28 14.		28 14.		

ALIGNMENTS

```
PC2297
V3 domain peptide P4611 - human immunodeficiency virus type 1 (fragment)
C;Species: human immunodeficiency virus type 1, HIV-1
C;Species: human immunodeficiency virus type 1, HIV-1
C;Date: 21-Reb-1995 #sequence_revision 05-Apr-1995 #text_change 09-Jul-2004
C;Accession: PC2297
R;Sherefa, K.; Scennerborg, A.; Steinbergs, J.; Saellberg, M.
Biochem. Biophys. Res. Commun. 205, 1658-1664, 1994
A;Title: Rapid grouping of HIV-1 infection in subtypes A to E by V3 peptide serotyping a. A;Reference number: PC2291; MUID:95110306; PMID:7811250
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                                                                                                                                                                                                                                                                                                                                                                                                                                                         19.3%; Score 37; DB 2; I 46.2%; Pred. No. 1.7e+02; vative 3; Mismatches 4;
                                                                                                                                                                                                                                                                                                                                                                         A)Cross-references: UNIPROT:077729
C,Superfamily: type B retrovirus env polyprotein
                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 46.2x
Local Similarity 6.2x
Local 6.2x
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                                                                                                                                                                                                                                                                                     A;Accession: PC2297
A;Molecule type: protein
A;Residues: 1-35 <SHE>
RESULT 1
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::|:||| 11 SIPIGPGRALYTT 23

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Stery1-sulfatase (EC 3.1.6.2), microsomal - rat (fragment)
N;Alternate names: arylsulfatase C
C;Species: Rattus norvegicus (Norway rat)
C;Accession: S0544
B;Kawano, J.I.; Kotani, T.; Ohtani, S.; Minamino, N.; Matsuo, H.; Oinuma, T.; Aikawa, E.
Biochim. Biophys. Acta 997, 199-205, 1989
A;Title: Characterization of rat and human steroid sulfatases.
A;Accession: S05414; MUID:89352671; PMID:2765556
A;Accession: S05414
A;Molecule type: protein
A;Residues: 1-26 <KAW>
C;Keywords: sulfuric ester hydrolase

4 Length 26; 18.8%; Score 36; DB 2; Length 26; 40.9%; Pred. No. 1.7e+02; tive 2; Mismatches 7; Indels Best Local Similarity 40.9 Matches 9; Conservative Query Match

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Gaps

12 GPGPEF----KTTLRVQNLGCY 29 4 GPGPNFLLIMADDLGIGDLGXY 25 셤 ò

RESULT 3 S13863

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10 PVGPGPEFKTTLRVQNLG 27
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C;Species: Lactobacillus acidophilus
C;Species: Lactobacillus acidophilus
C;Date: 06-0ct-1994 #sequence_revision 18-Nov-1994 #text_change 09-Jul-2004
C;Accession: A54257
R;Ikeda, S.; Ma, G.T.; Ives, D.H.
B;Ikeda, S.; Ma, G.T.; Ives, D.H.
A;Ithe: Hetcodhmeric decxynucleoside kinases of Lactobacillus acidophilus R-26: functi
A;Reference number: A54257
A;Accession: A54257
A;Accessi
dihydrolipoamide dehydrogenase (EC 1.8.1.4) - Trypanosoma cruzi (fragment)
C;Species Trypanosoma cruzi
C;Date: 18-Feb-1994 #sequence_revision 06-Sep-1996 #text_change 23-May-1997
C;Accession: 813863
C;Accession: 813863
C;Accession: 813863
C;Accession: 194, 863-869, 1990
A;Title: Purification and characterization of lipoamide dehydrogenase from Trypanosoma A;Reference number: 813863; MUD:91099369; PMID:2269305
A;Reference number: 813863
A;Accession: 813863
A;Accession: 813863
A;Accession: A;Accession: A;Accession: A;Accession: A;Accession: B;Accession: B;Accession: B;Accession: B;Accession: B;Accession: A;Accession: A;Accession: B;Accession: A;Accession: A;Accession: A;Accession: A;Accession: B;Accession: A;Accession: A;Acce
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Die1563
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Die1563
Die1668: Gallus gallus (chicken)
C;Species: 28-Oct-1994 #sequence_revision 28-Oct-1994 #text_change 09-Jul-2004
C;Accession: D61563
Die16: 28-Oct-1994 #sequence_revision 28-Oct-1994 #text_change 09-Jul-2004
C;Accession: D61563
Die16: Rep. 7, 631-636, 1987
A;Title: Gene conversion in avian mesotocin and vasotocin genes: a recurrent mechanism A;Accession: D61563
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                                                                                        A/Cross-references: UNIPROT: Q9R4Z3
A/BXDSPATMENTELL SOURCE: R-26
A/BXDSPATMENTELL SOURCE: R-26
A/BOUTE: SEQUENCE EXTRACTED from NOBI backbone (NCBIP:146748)
C/Superfamilly: Lactobacillus acidophilus deoxyadenosine kinase
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18.2%; Score 35, DB 2; Length 35;
Best Local Similarity 38.9%; Pred. No. 3.3e+02;
Matches 7; Conservative 3; Mismatches 8; Indels
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C; Superfamily: oxytocin-neurophysin
C; Keywords: hormone
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C;Accession: B36912

R;Franklund, C.V.; Baron, S.F.; Hylemon, P.B.
J. Bacteriol. 175, 3002-3012, 1993
A;Title: Characterization of the baiH gene encoding a bile acid-inducible NADH:flavin oxiA;Reference number: A36912; MUID:93259945; PMID:8491719
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C;Superfamily: type E retrovirus env polyprotein
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C;Species: Heterocentrotus
C;Species: Heter
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R; Sherefa, K.; Soennerborg, A.; Steinbergs, J.; Saellberg, M.
Bjochem. Biophys. Res. Commun. 205, 1558-1664, 1994
A;Title: Rapid grouping of HIV-1 infection in subtypes A to E by V3 peptide serotyping A;Reference number: PC2291; MUID:95110306; PMID:7811250
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                                                                                                                                                                                                                                                                                                                                                                                             C;Species: Eubacterium sp.
C;Date: 07-Apr-1994 #sequence_revision 18-Nov-1994 #text_change 20-Jun-2000
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C;Species: human immunodeficiency virus type 1, HIV-1
C;Date: 21-Feb-1995 #sequence_revision 05-Apr-1995 #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                                                                 hypothetical protein 2 baiG-region [imported] - Bubacterium sp. (fragment)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Status: preliminary; not compared with conceptual translation A; Molecule type: nucleic acid A; Molecule type: nucleic acid A; Residues: 1-35 cFRA A; Experimental source: VPI 12708 A; Note: sequence extracted from NCBI backbone (NCBIP:131908)
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7 PIGAGKSSLTSLLAEXLG 24
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TLTLVELGCIVV-GII 21
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11 SIHIGPGRAFYTT 23
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C,Accession: PC2296
R,Sherefa, K.; Scennerborg, A.; Steinbergs, J.; Saellberg, M.
R,Sherefa, K.; Scennerborg, A.; Steinbergs, J.; Saellberg, M.
Biochem. Biophys. Res. Commun. 205, 1658-1664, 1994
A;Title: Rapid grouping of HIV-1 infection in subtypes A to E by V3 peptide serotyping a. A;Reference number: PC2291; MUID:95110306; PMID:7811250
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Nakazaki, N.; Shimpo, S.; Sugimoto, M.; Takazawa, M.; Yamada, M.; Yasuda, M.; Tabata, S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    C,Accession: M41161
R;Pei, Z.; Ellison III, R.T.; Blaser, M.J.
Biol. Chem. 266, 1631-16369, 1991
A;Title: Identification, purification, and characterization of major antigenic proteins A;Reference number: A41161; MUID:91358413; PMID:1885571
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C;Species: Campylobacter jejuni
C;Date: 28-May-1992 #sequence_revision 28-May-1992 #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                  V3 domain peptide P4346 - human immunodeficiency virus type 1 (fragment)
C,Species: human immunodeficiency virus type 1, HIV-1
C,Date: 21-Feb-1995 #sequence_revision 05-Apr-1995 #text_change 09-Jul-2004
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46.2%; Pred. No. 8.8e+02;
tive 3; Mismatches 4; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Cross-references: UNIPROT:Q70826; UNIPROT:Q70831
C;Superfamily: type E retrovirus env polyprotein
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                                     A;Cross-references: UNIPROT:P82964
A;Experimental source: haemocytes
C;Keywords: antibacterial
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Best Local Similarity 46.2
Matches 6; Conservative
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PPPRPPIGPRP 18
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A;Molecule type: protein
A;Residues: 1-35 <PEI>
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Best Local Similarity
Matches 5; Conserv
                  A; Residues: 1-30 <SCH>
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C;Species: Carcinus maenas (green crab, common shore crab)
C;Date: ll-Mar-1998 #sequence_revision 17-Apr-1998 #text_change 09-Jul-2004
C;Accession: S74112
R;Schaapp, D.; Kemp, G.D.; Smith, V.J.
Rischaapp, D.; Kemp, G.D.; Smith, V.J.
Rischaapp, D.; Kemp, G.D.; Smith, W.J.
Ryritle: Purification and characterization of a proline-rich antibacterial peptide, with A;Reference number: S74112; MUID:97008941; PMID:8856051
A;Molecule type: protein
                                                                                                                                                                                                                                                                                                                                                                                  C,Accession: 169492
R;Choe, M.; Reznikoff, W.S.
Bacteriol. 175, 1165-1172, 1993
A;Title: 1dentification of the regulatory sequence of anaerobically expressed locus aeg-A;Reference number: 154984; MUID:93163046; PMID:8432709
A;Accession: 169492
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C;Species: Bos primigenius taurus (cattle)
C;Species: Bos primigenius taurus (cattle)
C;Bate: 20-Feb-1995 #sequence_revision 20-Feb-1995 #text_change 20-Feb-1995
C;Accession: PQ0070
R;Tanaka, A.; Ishiguro, N.; Shinagawa, M.
S;Decription: Sequence analysis of bovine T-cell receptor beta chain genes.
A;Reference number: JQ0472
A;Accession: PQ0070
                                                                                                                                                                                                                                                                                                                                    C.Species: Escherichia coli
C.Date: 07-Jun-1996 #sequence_revision 07-Jun-1996 #text_change 09-Jul-2004
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Pred. No. 5.3e+02;
0; Mismatches 3; Indels
                        Length 10;
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A;Molecule type: DNA
A;Residues: 1-30 <RES>
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66.7%;
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Matches 6; Conservative
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A;Residues: 1-22 <TAN>
A;Experimental source: T cell
C;Genetics:
                                                                        Conservative
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C,Keywords: receptor
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REBULT 15
568394

H-transporting two-sector ATPase (EC 3.6.3.14) chain G - Chlamydomonas reinhardtii (fra
N.Alternate names: ATP synthase chain G
C/Species: Chlamydomonas reinhardtii
C/Species: Chlamydomonas reinhardtii
C/Species: O4-Dec-1997 #sequence_revision 12-Dec-1997 #text_change 09-Jul-2004
C/Accession: S68104
R.F.F.F. 183-166, 1995
R.F.F. 183-166, 1995
A.F.Title: Isolation of CP(0)CP(1) from Chlamydomonas reinhardtii cw15 and the N-terminal A.Reference number: S68388; MUID:96128220; PMID:8543042
A.Molecule type: protein
A.Residues: 1-19 <FIE.
A.Residues: 1-19 <FIE.
A.Residues: 1-19 <FIE.
A.Residues: Los Experimental source: strain CW15
DNA Res. 8, 205-213, 2001
A/Itle: Complete Genomic Sequence of the Filamentous Nitrogen-fixing Cyanobacterium Ana A/Reference number: AB1807; MUID:21595285; PMID:11759840
A/Reference number: AB1807; MUID:21595285; PMID:11759840
A/Reference number: AB2525
A/Status: preliminary
A/Molecule type: DNA
A/Residues: 1-35 «KUR»
A/Residues: 1-35 «KUR»
A/Residues: 1-35 «KUR»
A/Cross-references: UNIPROT:08YKC1; GB:BA000020; FIDN:BAB77138.1; PID:g17134579; GSPDB:GAperimental source: strain PCC 7120
A/Edenetics:
A/Gene: asr7380
A/Gene: plasmid
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16.4%; Score 31.5; DB 2; Length 35;
Best Local Similarity 40.7%; Pred. No. 1e+03;
Matches 11; Conservative 1; Mismatches 2; Indels 13;
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A,Genome: nuclear
C,Keywords: chloroplast; hydrolase
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Human immunodeficiency virus 1.
Viruses; Retroid viruses; Retroviridae; Lentivirus.
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42.1%;
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Copyright (c) 1993 - 2005 Compugen Ltd.
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                                                                                              1612378 seqs, 512079187 residues
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Maximum Match 100%
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Envelope glycoprotein (Fragment).
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Viruses; Retroid viruses; Retroviridae; Lentivirus.
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                                                 Ida S., Gatanaga H., Shioda T., Nagai Y., Kobayashi N., Shimada K., Khura S., Iwamoto A., Oka S.;

"HIV UP STORT I V3 variation dynamics in vivo:long-term persistence of "HIV Propylum-inducing genotypes and transient presence of cyncytium-inducing genotypes is Rambi. AB005327; BAA33245.1; "RAMBI. AB005327; Cviral capsid; IEA.

GO: GO:0016021; Cviral capsid; IEA.
GO: GO:0019031; Cviral envelope; IEA.
RO: GO:0015198; F:structural molecule activity; IEA.
RITHEAPTO: IPR007110; Ig11ke.
READ PROSSIG: GP120; I.
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Ida S., Gatanaga H., Shioda T., Nagai Y., Kobayashi N., Shimada K., Kimura B., Iwamoto A., Oka S.,
Kimura B., Iwamoto A., Oka S.,
Iwamoto A., Oka S.,
Iwamoto A., Oka S.,
Inducio B., Okariation dynamics in vivo:long-term persistence of non-syncytium-inducing genotypes and transient presence of cyncytium-inducing genotypes and transient presence of cyncytium-inducing genotypes during the course of progressive AIDS.";
Inducing genotypes during the course of progressive AIDS.";
EMBL, AB005329; BA332247.1, -
GO; GO:0015021; C:integral to membrane; IEA.
GO; GO:0019028; C:integral to membrane; IEA.
GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0019031; C:viral molecule activity; IEA.
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Viruses; Retroid viruses; Retroviridae; Lentivirus.
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                                           01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-UNY-2003 (TrEMBLrel. 24, Last annotation update)
Immunodeficiency virus type 1, viral sample FLQ5R3C (Florida local control 01), partial env cds, V3 region. (Fragment).
Human immunodeficiency virus 1.
Viruses; Retroid viruses; Retroviridae; Lentivirus.
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01-JUN-2003 (TYEMBLEEL. 24, Last annotation update)
11mmunodeficiency virus type 1, viral sample FLQ5R3A (Florida local control 01), partial env cds, V3 region. (Fragment).
Human immunodeficiency virus 1.
Viruses; Retroid viruses; Retroviridae; Lentivirus.
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A STOCKNESS FROM THE PUBMED-1930252;

A REDILINE-98080117; PubMed-9430252;

A Ida S., Gatanaga H., Shioda T., Nagai Y., Kobayashi N., Shimada K.,

Ida S., Jamonco A., Oka S.;

Tiducto I V3 variation dynamics in vivo:long-term persistence of cyncytium-inducing genotypes and transient presence of cyncytium-inducing genotypes during the course of progressive AIDS.";

Inducing genotypes during the course of progressive AIDS.";

AIDS Res. Hum. Retroviruses 13:1597-1609(1997).

Rembi, AB005421; BAA3338.1; ---

REMBI, AB005421; BAA33338.1; ---

REMBI, Colorisoral capsid, IEA.

GO; GO:0019021; C:viral envelope; IEA.

RO; GO:0019031; C:viral envelope; IEA.

RO; GO:0019031; C:viral envelope; IEA.

RO; GO:0019031; C:viral envelope; IEA.

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RITHERPO; IPR000777; GP120.

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AIDS; Coat protein; Envelope protein; Glycoprotein; Transmembrane.
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                                     Human immunodeficiency virus 1.
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"V3-loop and nef gene sequences of HIV-1 isolates from a hemophiliac cohort with long-term non-progressive infection.";
AIDS 13:532-534(1999).
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(APR-1992) to the EMBL/GenBank/DDBJ databases. 27; AAA44575.1; -.
        GO; GO:0016021; C:integral to membrane; IEA.
GO; GO:0019028; C:integral to membrane; IEA.
GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0019031; C:viral envelope; IEA.
GO; GO:005198; F:structural molecule activity; IEA.
InterPro; IPR000777; GP120.
InterPro; IPR00110; Ig-like.
Pfam; PF00516; GP120; I.
AIDS; Coar roccet.
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GO; GO:0016021; C:integral to membrane; IEA.
GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0019031; C:viral capsid; IEA.
GO; GO:0019031; C:viral envelope; IEA.
GO; GO:0005198; F:structural molecule activity; IEA.
InterPro; IPR00077; GP120.
InterPro; IPR011056; Pept. S24_S26_C.
Pfam; PF00516; GP120; 1.
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(TrEMBLrel. 08, Last sequence update)
(TrEMBLrel. 24, Last annotation update)
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01-NOV-1998 (TrEMBLrel. 08, Last sequence update)
01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
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Viruses: Retroid viruses; Retroviridae; Lentivirus
NCBI_TaxID=11676;
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01-NOV-1998 (TrEMBLrel. 08, Last sequence update)
01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
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Viruses; Retroid viruses; Retroviridae; Lentivirus
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5; Mismatches
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                         8 TLPVGPGPEFKTTLRV 23
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MEDLINE-80090117; PubMed-9430252;

MEDLINE-80090117; PubMed-9430252;

A Kimura S., Gatanaga H., Shioda T., Nagai Y., Kobayashi N., Shimada K.,
Ida S., Gatanaga H., Shioda T., Nagai Y., Kobayashi N., Shimada K.,
Kimura S., Iwamoto A., Oka S.;

"HIV type I V3 variation dynamics in vivo:long-term persistence of
"Inducing genotypes and transient presence of cyncytium-
inducing genotypes and transient presence of cyncytium-
inducing genotypes during the course of progressive AIDS.";

AIDS Res. Hum. Retroviruses 13:1597-1609(1997).

EMBL, AB005419; BA433336.1; -

R GO; GO:0019028; C:viral capsid; IEA.

GO; GO:0019028; C:viral envelope; IEA.

GO; GO:0019031; C:viral envelope; IEA.

R HIDS; Coat protein; Envelope protein; Glycoprotein; Transmembrane.
                               InterPro, IPR0100777, GP120.
InterPro, IPR01105, Pept_824_826_C.
Pfam; PP00516; GP120; Pept_824_B26_C.
AIDS, Coat protein, Envelope protein, Glycoprotein, Transmembrane.
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35 AA; 3718 MW; 9F53DA6E698BEB8C CRC64;
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35 AA; 3831 MW; 9F5A5B2A698BE26B CRC64;
   GO; GO:0005198; F:structural molecule activity; IEA.
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01-NOV-1998 (TrEMBLrel. 08, Last sequence update)
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Viruses; Retroid viruses; Retroviridae; Lentivirus.
NCBI_TaxID=11676;
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Viruses; Retroid viruses; Retroviridae; Lentivirus.
VCBL_TaxID=11676;
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Pred. No. 1.2e+02;
3; Mismatches 3;
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11 SIPIGPGRAFHTT 23
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Submitted (AUG-1996) to the EMBL/GenBank/DDBJ databases.
EMBL; U66657; AABS8149.1; -.
GO; GO:0015021; C:integral to membrane; IEA.
GO; GO:0019028; C:viral capaid; IEA.
GO; GO:0019031; C:viral capaid; IEA.
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Submitted (AUG-1995) to the EMBL/GenBank/DDBJ databases.
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                                                                                                                                                                                                                                                                          Created)
Last sequence update)
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(TrEMBLrel. 04, Last sequence update)
(TrEMBLrel. 24, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                          Human immunodeficiency virus 1.
Viruses; Retroid viruses; Retroviridae; Lentivirus.
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Viruses; Retroid viruses; Retroviridae; Lentivirus
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11 SIPIGPGRAFYTTRQI 26
8 TLPVGPGPEFKTTLRV 23
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11 SIPIGPGRAFYTTRQI 26
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Matches

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Gaps

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Antibodies of symptomatic human immunodeficiency virus type 1-
infected individuals are directed to the V3 domain of noninfectious
and not of infectious virions present in autologous serum.";
and not of infectious virions present in autologous serum.";
EMBL; Z15163; CAA78862.1;
GO; GO:0016021; C:integral to membrane; IEA.
GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0019031; C:viral envelope; IEA.
GO; GO:0019031; E:structural molecule activity; IEA.
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Pfam; PF00516; GP120; 1.
AIDS; Coat protein; Envelope protein; Glycoprotein; Transmembrane.
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Submitted (AUG-1995) to the EMBL/GenBank/DDBJ databases
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01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update) 01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
                                                                                             Human immunodeficiency virus 1.
Viruses; Retroid viruses; Retroviridae; Lentivirus.
NCBI_TaxID=11676;
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Viruses; Retroid viruses; Retroviridae; Lentivirus.
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Pred. No. 1.2e+02;
4; Mismatches 4;
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InterPro; IPR011056; Pept S24 S26_C.
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Best Local Similarity 46.7%;
Matches 7; Conservative '
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                                                              V3 loop (Fragment).
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SEQUENCE
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                                           MEDLINE=98090117; PubMed=9430252;
A Ida S., Gatanaga H., Shioda T., Nagai Y., Kobayashi N., Shimada K.,
A Kimura S., Iwamoto A., Oka S.;
Kimura S., Iwamoto A., Oka S.;
Kimura S., Iwamoto A., Oka S.;
Thy type 1 V3 variation dynamics in vivo:long-term persistence of non-syncytium-inducing genotypes and transient presence of cyncytium-inducing genotypes and transient presence of cyncytium-Inducing genotypes and transient presence of cyncytium-Inducing genotypes during the course of progressive AIDS.",
AIDS Res. Hum. Retroviruses 13:1597-1609(1997).
REMBL; AB005440; BAA33356.1;
RGO; GO:0019028; C:viral capsid; IEA.
GO; GO:0019031; C:viral capsid; IEA.
GO; GO:0019031; C:viral envelope; IEA.
GO; GO:0019031; C:viral envelope; IEA.
RO; GO:0019031; C:viral molecule activity; IEA.
RINTEPPO; IPR000777; GPIC.
R InterPro; IPR001056; Pept_S24_S26_C.
R Pfam; PF00516; GPI20; 11
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EMBL; AY30514; AAQ88346.1; -.
Interpro; IPR001777; FP120.
Interpro; IPR011055; Pept_S24_S26_C.
Pfam; PF00516; GP120; 1.
ALDS; Coat protein; Glycoprotein; Transmembrane.
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Pred. No. 1.2e+02;
3; Mismatches 3; Indels
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05-JUL-2004 (TrEMBLrel. 27, Created)
05-JUL-2004 (TrEMBLrel. 27, Last sequence update)
05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
Gp120 (Fragment).
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Viruses; Retroid viruses; Retroviridae; Lentivirus.
VCBI_TaxID=11676;
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53.8%;
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12 IPIGPGRAFYTTRQI 26
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Best Local Similarity 46...,
Best Local 7; Conservative
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11 SIPIGPGKAFYTT 23
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RESULT 14 076250 ID 07 AC 07 DT 01

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8 TLPVGPGPEFKTT 20 |::|||| | || |1 SIPIGPGSAFYTT 23 දු දු

Search completed: April 6, 2005, 13:44:42 Job time : 181 secs

V3 loop p P24H/PRI p24E/V3 c Chimaeric

Chimaeric

HIV-1 pep HIV-1 pep HIV-1 vac HIV-1 vac HIV-1 chim HIV-1 chim T1/V3 con Chimaeric HIV-1 pep HIV-1 vac HIV-1 vac HIV-1 vac HIV-1 vac HIV-1 vac PND EE15-

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Aav38409
Aav38409
Aar6870
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Aaw28890
Aaw67356
Aaw9964
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Aar68677
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AAW99973
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                        2005, 13:08:44; Search time 168 Seconds (without alignments) 80.575 Million cell updates/sec
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                                           192 – – 1921 YEVHPYGTLPVGPGPEFKTTLRVQNLGCYVVSGLI
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                                       US-09-647-544-2_COPY_952_986
                  protein search, using sw model
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ALIGNMENTS

854512

Total number of hits satisfying chosen parameters:

length: 0 length: 35

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Minimum DB Maximum DB

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Geneseq 16Dec04:*

Database

2105692 segs, 386760381 residues

Perfect score:

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Scoring table:

Searched:

RESULT 1 AAR68713 ID AAR68713 ID AAR68713; XX AC AAR68713; XX DT 16-OCT-2003 (revised) DT 25-MAR-2003 (revised) DT 25-MAR-2003 (revised) DT 07-SEP-1995 (first entry) XX XX DE FIL/T5 chimera, CLTB-159. XX XX M 7-cell; epitope; HIV-1; core protein; p24E; B-cell; antigen; gp160; XX

Aar68713 PRI/T5 ch

Description

DB

Length

Query Match

Score

Result No.

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

geneseqp19808: *
geneseqp19908: *
geneseqp2000s: *
geneseqp2001s: *
geneseqp2002s: *
geneseqp2003s: *
geneseqp2003bs: *
geneseqp2003bs: *

SUMMARIES

gag;

This sequence represents the T-cell epitope derived from the HIV-1 core protein, T5, linked to a B-cell epitope, PRI which represents a consensus sequence derived from New York and Amsterdam HIV-1 isolates. Chimeric

AAY04445 AAW25849 AAW67365

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Aaw25883 Chimaeric Aaw967399 HIV-1 pep Aaw98900 HIV-1 pep Aay39728 HIV1 chim Aar7763 PRI/T5 ch Aaw56812 T5/PRI ch Aaw8899 HIV-1 pep Aaw98899 HIV-1 pep Aay3982 HIV-1 pep Aay39899 HIV-1 pep Aay39727 HIV1 chim Aar7762 T5/PRI ch Aar7762 T5/PRI ch Aar14467 Human imm Aab17762 HIV-1 iso Aay37368 HIV-1 usc Aaw58897 HIV-1 vec Aaw5897 HIV-1 vec Aaw5895 HIV-1 vec

AAR68713 AAW25883 AAW57399 AAW39900 AAX39728 AAW52882 AAW67398 AAW52882 AAW57762 AAR77762 AAR17762 AAR17762 AAR68770 AAR68770 AAW53880 AAW53880 AAW53880 AAW53880

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The invention relates to new synthetic peptides comprising at least one amino acid sequence comprising an HIV gag protein T-cell epitope linked at the T-or N-terminus to an amino acid sequence comprising a B-cell epitope of the V3 loop of an HIV env protein, which can be used to generate vaccines against HIV-1. The T-cell epitope sequence is pref. selected from the T-helper determinant core peptides P248, P244, p244, p244 while the B-cell epitopes are derived from HIV strains including CTLB-56, V3MN, CTLB-29, CTLB-55, SF2, LAI, IIIB, RF, Z6, 2054, T14 and BX08. The sequence represents and can be linked to a branched Lys backbone. This sequence represents and can be linked to a branched CT-belper determinant core peptide T5 (AAW25881) which corresponds to a corresponds to a peptide generated from the consensus sequence of the New York and Amsterdam HIV-1 isolates. The B-cell epitope is linked to the N-terminus of the T-helper peptide. (Updated on 25-MAR-2003 to correct PF field.)
                                                                                                                                                                                                                                                                ä
               These peptide sequences may also be used in the production of multimeric peptides in which the peptides are C-terminally modified by the addition of a Lys residue which is modified on its epsilon amino acid to carry an additional copy of the peptide molecule. The linear and multimeric peptides may be used for the treatment of AIDS by acting to displace the binding of HIV virus to human or animal cells or by disturbing the 3D organisation of the virus. (Updated on 25-MMR-2003 to correct PN field.) (Updated on 16-OCT-2003 to standardise OS field)
 peptides such as this, may be used in the production of HIV-1 vaccines
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HIV; human immunodeficiency virus; gag; T-cell; B-cell; epitope; env; V3 loop; vaccine; determinant; chimaeric.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Tandem synthetic HIV peptide(s) useful as immunogens - comprising gag protein T-cell epitope linked to env protein B-cell epitope.
                                                                                                                                                                                                                                                                Gaps
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                                                                                                                                                                                                                       Score 46; DB 2; Length 33;
Pred. No. 69;
7; Mismatches 4; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Chimaeric T/B cell epitope peptide CLTB-159.
                                                                                                                                                                                                                                                                                                                       SIPIGPGRAFYTTGYKYKVVKIEPLG 30
                                                                                                                                                                                                                                                                                                   8 TLPVGPGPEFKTT----LRVQNLG 27
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                                                                                                                                                                                                                                                                                                                                                                                                                                  AAW25883 standard; peptide; 33 AA.
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                                                                                                                                                                                                                       Similarity 34.6%; 9; Conservative ...
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(first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 1997-332082/30
                                                                                                                                                                                      Sequence 33 AA,
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22-OCT-1997
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Best Local S
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                                                                                                                                                                                                                                              Immunogen; vaccine; HIV-1; T-cell; B-cell; epitope; core protein; gp120;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Synthetic human immunodeficiency virus-1 peptide(s) - containing T-cell epitope and B-cell epitope(s) are candidate vaccines against HIV-1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                          Gaps
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 Length 33;
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                         7; Mismatches
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 Score 46;
Pred. No.
                                                                  SIPIGEGRAFYTTGYKYKVVKIEPLG 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8 TLPVGPGPEFKTT-----LRVQNLG 27
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                                                   ---LRVQNLG 27
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                                                                                                                                                                                                                       HIV-1 peptide epitope CLTB-159.
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                                                                                                                                          AAW67399 standard; peptide; 33
24.0%;
                                                                                                                                                                                                                                                                                                                                                                               95US-00464329
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94US-00257528
                                                                                                                                                                                            (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                              (CONN-) CONNAUGHT LAB LTD
                         Conservative
                                                   8 TLPVGPGPBFKTT---
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 1998-556461/47
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Best Local Similarity
Matches 9; Conserv
             Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 33 AA;
                                                                                                                                                                                                                                                                                                                                                                               05-JUN-1995;
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                                                                                                                                                                                                                                                                                       Synthetic.
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                                                                                                                                                                    AAW67399;
 Query Match
                         Matches
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the immunogenic composition of the invention. The composition comprises a synthetic fusion polypeptide which includes a sequence encoding 1 or more T cell epitopes and a sequence encoding 1 or more perfect both the T cell and B cell epitopes are derived from HIV proteins. The compositions are useful as vaccines against HIV infection. The composition induces HIV-1-specific polyclonal antibodies that are opsonising and antiviral. The peptide components may be selected to induce a response against different viral isolates and in subjects who recognise different T cell epitopes. (Updated on 17-OCT-2003 to
                                                                                                                                                                                                                                                                              This sequence represents a fragment of a HIV1 protein, and can be used in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note= "Modified at the epsilon N by the sequence given
in AAR68713, which represents the same sequence as bases
1-33 of this sequence"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note= "Modified at the epsilon N with a Lys residue which is substituted on the alpha and epsilon N with the sequence given in AAR68713"
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                                                                                                                                                              Immunogenic composition containing synthetic fusion polypeptides containing both the T and B cell epitopes of the human immunodeficiency virus, useful antigens in producing vaccines.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       24.0%; Score 46; DB 2;
34.6%; Pred. No. 69;
tive 7; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRI/T5 chimera lysine branched peptide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note= "B cell epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note= "T cell epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SIPIGPGRAFYTTGYKYKVVKIEPLG 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8 TLPVGPGPEFKTT-----LRVQNLG 27
                                                                                                                                                                                                                                           Example 1; Col 25-26; 43pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAR77763 standard; peptide; 35 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human immunodeficiency virus 1
                                                                                            Sia CDY;
93US-00073378
94US-00257528
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/label= PRI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     19. .33
/label= T5
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                                                       (CONN-) CONNAUGHT LAB LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9; Conservative
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                                                                                          Klein MH, Chong P,
                                                                                                                             WPI; 1999-550482/46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 33 AA;
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09-JUN-1993;
09-JUN-1994;
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08-SEP-1995
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The present invention describes a synthetic peptide comprising an amino acid sequence containing a T-cell epitope of an HIV gag protein linked a its C terminus to an amino acid sequence containing a B-cell epitope of an HIV gp41 protein and containing the amino acid sequence: XILKDWX2; where XI = B, A, G or Q, and X2 = A or T, or an amino acid sequence capable of eliciting an HIV-specific antiserum and recognizing the sequence XILKDWX2. The synthetic peptide is useful in vaccines against HIV infection and in diagnostic applications. AAW98892 to AAW98999; to AAW99989 represent synthetic peptides from the present
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HIV; vaccine; immunogenic composition; T cell epitope; B cell epitope; infection; antibody; antiviral.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                  Synthetic chimeric HIV polypeptides – comprising gag protein T-cell epitope linked to gp41 B-cell epitope.
                                                    HIV-1; human immunodeficiency virus; vaccine; T-cell epitope; gag protein; B-cell epitope; gp41 protein; chimeric; infection.
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                   HIV-1 vaccine synthetic peptide SEQ ID NO:84.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      24.0%; Score 46; DB
llarity 34.6%; Pred. No. 69;
Conservative 7; Mismatches
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                                                                                                                               Human immunodeficiency virus 1.
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(first entry)
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 1999-189590/16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 33 AA;
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                                                                                                                                                                                                                                           05-JUN-1995;
                                                                                                                                                                                                                                                                                39-JUN-1993;
                                                                                                                                                                                                                                                                                                   09-JUN-1994;
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26-NOV-1999
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                                                                                                              Synthetic
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Gaps . 9 ğ

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This sequence represents the T-cell epitope derived from the HIV-1 core protein, T5, linked to consesus B-cell epitope, PRI which represents a consensus sequence derived from New York and Ametradam HIV-1 isolates. Chimeric peptides such as this, may be used in the production of HIV-1 vaccines. These peptides sequences may also be used in the production of HIV-1 multimeric peptides in which the peptides are C-terminally modified by the addition of a Lys residue which is modified on its epsilon amino acid to carry an additional copy of the peptide modecule. The linear and multimeric peptides may be used for the treatment of AIDS by acting to displace the binding of HIV wirus to human or animal cells or by displace the binding of the virus. (Updated on 25-MAR-2003 to correct PN field.) (Updated on 16-OCT-2003 to standardise OS field)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HIV; human immunodeficiency virus; gag; T-cell; B-cell; epitope; env; V3 loop; vaccine; determinant; chimaeric.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Tandem synthetic HIV peptide(s) useful as immunogens - comprising gag protein T-cell epitope linked to env protein B-cell epitope.
                                                                                                                                                         Novel tandem synthetic HIV-1 peptide(s) - comprising T-cell epitope agg protein linked to B-cell epitope of V3 loop protein of an HIV-I isolate.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 2; Length 33;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       23.7%; Score 45.5; Dilarity 34.6%; Pred. No. 81; Conservative 5; Mismatches
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                                                                                                                                                                                                                                                         Claim 4; Page 46; 69pp; English.
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                    93US-00073378
                                                                                               Klein MH;
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(first entry)
                                                          (CONN-) CONNAUGHT LAB LTD.
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                                                                                                                                     WPI; 1995-036400/05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity
                                                                                               Chong P,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 33 AA;
                    09-JUN-1993;
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22-OCT-1997
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                                                                                               Sia CDY,
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Matches
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                                                                                                                                                                                                                                                                                                                                                                    contains four oppies a peptide monomer comprising the T-cell spitope derived from the HIV-1 core protein, T5, linked to the B-cell spitope, PRI which represents a commsensus sequence derived from New York and Amsterdam HIV-1 isolates. The entire multimer contains four copies of the same sequence linked through Lys residues. The B-cell epitope may be derived from HIV-1 proteins esp. gpi60, agg and pol proteins. These chimeric peptides may then be used in the production of HIV-1 vaccines. The linear and multimeric peptides may be used for the treatment of AIDS by acting to displace the binding of HIV virus to human called or by disturbing the 3D organisation of the virus. (Updated on 25-MAR-2003 to correct PN field.) (Updated on 16-OCT-2003 to standardise OS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               T-cell; epitope; HIV-1; core protein; p24E; B-cell; antigen; gp160; gag; pol; vaccine; multimeric peptide; AIDS; 3D organisation.
                                                                                                                                                                                                                                Novel tandem synthetic HIV-1 peptide(s) - comprising T-cell epitope of gag protein linked to B-cell epitope of V3 loop protein of an HIV-I isolate.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                      This sequence represents a multimeric lysine branched peptide which
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 46; DB 2; Length 35;
Pred. No. 73;
7; Mismatches 4; Indels
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/label= T5
/note= "T cell epitope"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8 TLPVGPGPEFKTT-----LRVQNLG 27
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAR68712 standard; peptide; 33 AA
                                                                                                                                                                                                                                                                                                               Claim 4; Page 46; 69pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human immunodeficiency virus 1.
                                      94WO-CA000317.
                                                                                                                                                       Sia CDY, Chong P, Klein MH;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 34.6%;
Matches 9; Conservative 7
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                                                                            93US-00073378
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(first entry)
                                                                                                                 (CONN-) CONNAUGHT LAB LTD.
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                                                                                                                                                                                              WPI; 1995-036400/05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 35 AA;
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25-MAR-2003
07-SEP-1995
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                                                                            39-JUN-1993;
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22-DEC-1994
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AAR6871

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Peptide

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Gaps

7;

Length 33;

DB 2;

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Score 45.5;
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34.6%;
                          Query Match 23.7%;
Best Local Similarity 34.6%;
Matches 9; Conservative
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Best Local Similarity
9; Conserve
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  Sequence 33 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 33 AA;
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                                                                                                                                                                                                                                                                                                                          Synthetic.
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                                                                                                                                                                                                    AAW98899;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Chong P,
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                                                                                                                                                RESULT 10
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ID AAY3
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                    amino acid sequence comprising an HIV gag protein T-call epitope linked at its C- or N-terminus to an amino acid sequence comprising an HIV gag protein T-call epitope linked epitope of the V3 loop of an HIV env protein, which can be used to generate vaccines against HIV-I. The T-cell epitope sequence is pref. selected from the T-helper determinant core peptides P24E, P24N, P24L, P24M and P24H while the B-cell epitopes are derived from HIV strains including CTLB-56, V3MN, CTLB-29, CTLB-55, SEZ, LAI, IIIB, RF, Z6, 2054, 1714 and BX08. The peptides are chimaeric and can be linked to a branched Lys backbone. This sequence represents a chimaeric peptide comprising the rhelper determinant core peptide T5 (AAM25881) with the HIV-1 strain MN env protein V3 loop B-cell epitope PRI which corresponds to a peptide generated from the consensus sequence of the New York and Amsterdam HIV-1 stoleting the Updated on 25-MAR-2003 to correct PF field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The invention relates to a novel immunogenic composition for use in vaccines for the treatment of HIV-1 comprising an HIV-1-derived T-cell epitope linked to an HIV-1-derived B-cell epitope. The T-cell epitopes are generally designed based on the p24 core protein and the B-cell epitopes from the V3 loop of the gp120 protein from various HIV-1 extrains. This peptide corresponds to a fusion of the T5 epitope (AAMW67397) and the V3 loop Becall epitope (AAMW67355) which is a consensus V3 loop peptide of the New York and Amsterdam HIV-1 isolates
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Immunogen; vaccine; HIV-1; T-cell; B-cell; epitope; core protein; gpl20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Synthetic human immunodeficiency virus-1 peptide(s) - containing T-cell epitope and B-cell epitope(s) are candidate vaccines against HIV-1.
                                                                                                                                                                                                                                                                                   Gaps
               invention relates to new synthetic peptides comprising at least
                                                                                                                                                                                                                                                                                   7;
                                                                                                                                                                                                                                                         DB 2; Length 33;
                                                                                                                                                                                                                                                                                   Indels
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                                                                                                                                                                                                                                                      23.7%; Score 45.5; I 34.6%; Pred. No. 81; ive 5; Mismatches
                                                                                                                                                                                                                                                                                                            2 EVHPYG-----TLPVGPGPEFKTT 20
                                                                                                                                                                                                                                                                                                                                    KIEPLGVAPNTRKSIPIGPGRAFYTT 32
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                                                                                                                                                                                                                                                                                                                                                                                                     AAW67398 standard; peptide; 33 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human immunodeficiency virus 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HIV-1 peptide epitope CLTB-158
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94US-00257528,
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                                                                                                                                                                                                                                         Query Match
Best Local Similarity 34.0.
9, Conservative
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                                                                                                                                                                                                                              Sequence 33 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                           Gape
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Synthetic chimeric HIV polypeptides - comprising gag protein T-cell epitope linked to gp41 B-cell epitope.
                           7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                HIV-1; human immunodeficiency virus; vaccine; T-cell epitope; gag protein; B-cell epitope; gp41 protein; chimeric; infection.
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                                                                                                                                                                                                                                                                                                                                                                                                                       HIV-1 vaccine synthetic peptide SEQ ID NO:83.
Pred. No. 81;
5; Mismatches
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                                                                                                          Example 1; Col 63-64; 41pp; English.
                                                                              2 EVHPYG-----TLPVGPGPEFKTT
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contains four oppies a peptide monomer formprishing the T-cell epitope derived from the HIV-1 core protein, T5, linked to the B-cell epitope, PRI which represents a commsensus sequence derived from New York and Amsterdam HIV-1 isolates. The entire multimer contains four copies of the same sequence linked through Lys residues. The B-cell epitope may be derived from HIV-1 proteins esp. 199160, aga and pol proteins. These chimeric peptides may then be used in the production of HIV-1 vaccines. The linear and multimeric peptides may be used for the treatment of AIDS by acting to displace the binding of HIV virus to human or animal cells or by disturbing the 3D organisation of the virus. (Updated on 25-MAR-2003 to correct PN field.) (Updated on 16-OCT-2003 to standardise OS
                                                                                                                      ,....c= "modified at the epsilon N by the sequence given in AAR68712, which represents the same sequence as bases is this sequence"
                                                                                                                                                                                                      /note= "Modified at the epsilon N with a Lys residue which is substituted on the alpha and epsilon N with the sequence given in AAR68712"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    This sequence represents a multimeric lysine branched peptide which
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             7;
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Pred. No. 86;
              1. .15
/label= T5
'--+e= "T cell epitope"
                                                                                                      'note= "B cell epitope'
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                                                                                                                                                                                                                                                                                                                                                                                                                                               Klein MH;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            23.7%;
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                                                                                   /label= PRI
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                              Chong P,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 35 AA;
                                                                                                                      Modified-site
                                                                                                                                                                                        Modified-site
                                                                                                                                                                                                                                                                                                                                            08-JUN-1994;
                                                                                                                                                                                                                                                                                                                                                                            09-JUN-1993;
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25-MAR-2003
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                                                                                                                                                                                                                                                                                                                                                                                                                                               Sia CDY,
     Key
Peptide
                                                                     Peptide
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           This sequence represents a fragment of a HIVI protein, and can be used in the immunogenic composition of the invention. The composition comprises a synthetic fusion polypeptide which includes a sequence encoding I or more I cell epitopes and a sequence encoding I or more B cell epitopes and a sequence encoding I or more B cell epitopes and a carrier. Both the T cell and B cell epitopes are derived from HIV proteins. The compositions are useful as vaccines against HIV infection. The composition induces HIV-1-specific polyclonal antibodies that are opposition induces HIV-1-specific polyclonal antibodies that are induce a response against different viral isolates and in subjects who recognise different T cell epitopes. (Updated on 17-OCT-2003 to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                T-cell; epitope; HIV-1; core protein; p24E; B-cell; antigen; gp160; gag; pol; vaccine; multimeric peptide; AIDS; 3D organisation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Immunogenic composition containing synthetic fusion polypeptides containing both the T and B cell epitopes of the human immunodeficiency virus, useful antigens in producing vaccines.
                                                                                                                   HIV; vaccine; immunogenic composition; T cell epitope; B cell epitope; infection; antibody; antiviral.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 2; Length 33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity 34.6%; Pred. No. 81; 9; Conservative 5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                T5/PRI chimera lysine branched peptide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2 EVHPYG-----TLPVGPGPEFKTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Example 1; Col 25-26; 43pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAR77762 standard; peptide; 35 AA.
                                                                                 HIV1 chimeric peptide CLTB-158
                                                                                                                                                                    Human immunodeficiency virus 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human immunodeficiency virus 1
                                                                                                                                                                                                                                                                         95US-00467881.
                                                                                                                                                                                                                                                                                                       93US-00073378.
                                                                                                                                                                                                                                                                                                                                                                                              Sia CDY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (revised)
(revised)
(first entry)
                                                                                                                                                                                                                                                                                                                                                          (CONN-) CONNAUGHT LAB LTD.
                                                   (first entry)
                                 (revised)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     standardise OS field)
                                                                                                                                                                                                                                                                                                                                                                                            Chong P,
                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 1999-550482/46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 33 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               16-OCT-2003
25-MAR-2003
08-SEP-1995
                                                                                                                                                                                                                                                                       06-JUN-1995;
                                                                                                                                                                                                                                                                                                         09-JUN-1993;
                                                                                                                                                                                                                                                                                                                           09-JUN-1994,
                                 17-OCT-2003
26-NOV-1999
                                                                                                                                                                                                      US5951986-A
                                                                                                                                                                                                                                       14-SEP-1999
                                                                                                                                                                                                                                                                                                                                                                                          Klein MH,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local S
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AAY39727;
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17-AUG-2000
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Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 15
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  SXCCCCCCCXSXATATAXAXAXAXAX
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                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                    Peptide RPI50 comprises segments of the Principal Neutralising Domain (envelope protein) from isolate AVR-2. The last Cys residue is added for the purpose of crosslinking to carrier proteins. Cysteine residues may be added, so that the residues at or near both ends form a disulfide bond, giving peptide a loop-like configuration, which can be utilised to enhance the immunogenic properties of the peptides. Protein is capable of eliciting, and/or binding with, neutralising Abs. The neutralising domain is bounded by cysteine residues which occur at positions 296 and 331. Peptides can be used as immunogens or screening reagents to generate or identify poly- or monoclonal antibodies. See also AARO4277-R04506 and AAQ04273-Q0450. (Updated on 25-MAR-2003 to correct PR field.) (Updated on 25-MAR-2003 to correct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ï
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Viral protein; vaccine; anti-viral; anti-HIV; therapy; infection; gp120;
                                                                                                                                                                                                                                                                                                                                                                                                                                    Revised record issued on 09-SEP-2004 : Correction to Feature Table Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                         Principal neutralising domain of HIV variants - used for producing peptide(s) and antibodies for diagnosis, prophylaxis and/or therapy therapy of HIV infection.
HIV isolate AVR-2; peptide RP150; principal neutralising domain; antibodies; diagnosis; prophylaxis; therapy; AIDS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ;
                                                                                                                                                                          Javaherian K, Farley J, Grimaila R;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HIV-1 isolate P1-932 gp120 protein V3 loop region fragment.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2; Length 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 44; DB 2
Pred. No. 93;
3; Mismatches
                                                                                                                                                                                                                                                                    Claim 8 (81); Page 77; 108pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAB10706 standard; protein; 35 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human immunodeficiency virus 1.
                                                                                                              88US-00252949
                                                                                                                      89US-00359543.
                                                                                         88US-00252949
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             22.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    11 VGPGPEFKTTLRVQNLGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9 IGPGRAFHTTGRI--IGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (revised)
(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 22.9
Best Local Similarity 50.0
Matches 9; Conservative
                                                                                                                                                                          Rusche JR, Putney SD,
Lynn DU, Petrobre J;
                                                                                                                                                    (REPK ) REPLIGEN CORP
                                                                                                                                                                                                        WPI; 1990-147824/19.
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 24 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO200047223-A2
                                                                                         33-OCT-1988;
                                                                                                                                 19-SEP-1989;
                                                                                                             03-OCT-1988;
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26-JAN-2001
                                                 WO9003984-A
                                                                                                                                                                                                                                                                                                                                                                                                                field.)
                               Synthetic
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                                                                                                                                                                                                                                                                                                                   Viral vaccine comprises a mixture of protein sequence variants of a single viral protein, which is useful for prevention and therapy of viral infections, especially HIV, in humans.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gpl20; interaction; co-receptor; CXCR4; CCR5; refractive index; V3 loop;
7-helix transmembrane receptor; glycopeptide; virucide; anti-HIV;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          22.9%; Score 44; DB 3; Length 35; 30.8%; Pred. No. 1.4e+02; tive 7; Mismatches 7; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HIV-1 V3-loop region (CXCR4-type) from isolate PI-932.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (NOCH-) NOCHT INST TROPENMEDIZIN BERNHARD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3 VHPYGT----LPVGPGPEFKTTLRVQ 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ABG73686 standard; peptide; 35 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Disclosure; Fig 1; 79pp; German.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Schreiber M, Seifert A, Meyer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human immunodeficiency virus 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   09-MAR-2001; 2001DE-01013042.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   09-MAR-2001; 2001DE-01013042.
                                                                99DE-01007485
99WO-EP009759
                                                                                                                         (STRA-) STRATHMANN & CO AG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity 30.8
nes 8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (revised)
                                                                                                                                                                                                                                                         WPI; 2000-549084/50.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 35 AA;
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                                                                12-FEB-1999;
03-DEC-1999;
                                                                                                                                                                                         Schreiber M;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   29-AUG-2003
11-MAR-2003
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Identifying compounds that modify interaction of gp120 and co-receptors, useful potentially for treating human immune deficiency virus infection, also new peptides.
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Disclosure; Pig 2; 68pp; German.

This invention describes novel substances that modify the interaction between the gpl20 protein of human immunodeficiency virus (HIV), or its fragmants, with the co-receptors CXCR4, CCR5 and/or other 7-helix transmembrane receptors for HIV. The method comprises (a) immobilizing a ligand for the co-receptor on a gold surface; (b) contacting the ligand with suspended cells that express the co-receptor; and (c) determining interaction by measuring the refractive index (RI) by plasmon resonance. The procedure is repeated using cells that have been incubated with a test compound, and this is identified if RI is lower for cells that includes the amino acid sequence of an HIV v3 loop (including flanking Cys). The products of the invention have virucide and anti-HIV and/or treatment of HIV infection. This sequence represents an HIV-1 v3-loop region described in the disclosure of the invention. (Updated on 29-loop region described in the disclosure of the invention. (Updated on 29-loop region described in the disclosure of the invention.

Sequence 35 AA;

1; Gaps 4. Query Match 22.9%; Score 44; DB 5; Length 35; Best Local Similarity 30.8%; Pred. No. 1.4e+02; Matches 9; Conservative 7; Mismatches 7; Indels

3 VHPYGT----LPVGPGPEFKTTLRVQ 24

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2 IRPHNITUTDRIHIGPGRSPHITRKIK 27

Search completed: April 6, 2005, 13:41:36 Job time : 169 secs

Sequence 167, App Sequence 27, Appl Sequence 27, Appl Sequence 155, App Sequence 472, App Sequence 472, App Sequence 472, App

Sequence 3 Sequence 3 Sequence 1 Sequence 472, App Sequence 12, Appl Sequence 10, Appl Sequence 20, Appl Sequence 10828, A Sequence 1083, A Sequence 104, App Sequence 105, App Sequence 113, Appl Sequence 293, Appl Sequence 293, Appl Sequence 293, Appl Sequence 284, Appl Sequence 284, Appl Sequence 284, Appl Sequence 284, Appl Sequence 285, Appl Sequence 286, Appl Sequence 286, Appl

Sequence 31, App Sequence 3, Appli Sequence 3, Appli

Sequence 167, App

ALIGNMENTS

Sequence 373, App

Sequence 3, Appl:

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US-10-443-622-133
; Sequence 133, Application US/10443622
; Publication No. US20040024192A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: PRT
ORGANISM: Glycine max
JS-10-424-599-185421
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37.5
37.5
37
37
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36.5
36.5
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Sequence 133, App
Sequence 7462, Ap
Sequence 238025,
Sequence 148, App
Sequence 71, App
Sequence 7, App
Sequence 2, Appli
Sequence 39770, A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 208, App
Sequence 208, App
Sequence 208, App
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                            (without alignments)
83.596 Million cell updates/sec
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                                                                                                                                                                                                                                                                                                                                                                                                      Published Applications AA:*

1: /cgn2_6/ptodata/1/pubpaa/USO7_PUBCOMB.pep:*

2: /cgn2_6/ptodata/1/pubpaa/USO7_PUBCOMB.pep:*

3: /cgn2_6/ptodata/1/pubpaa/USO6_PUBGOMB.pep:*

4: /cgn2_6/ptodata/1/pubpaa/USO6_PUBGOMB.pep:*

5: /cgn2_6/ptodata/1/pubpaa/USO6_PUBGOMB.pep:*

7: /cgn2_6/ptodata/1/pubpaa/USO8_PUBCOMB.pep:*

7: /cgn2_6/ptodata/1/pubpaa/USO8_PUBCOMB.pep:*

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10: /cgn2_6/ptodata/1/pubpaa/USO8_PUBCOMB.pep:*

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13: /cgn2_6/ptodata/1/pubpaa/USO8_PUBCOMB.pep:*

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19: /cgn2_6/ptodata/1/pubpaa/USO8_PUBCOMB.pep:*

10: /cgn2_6/ptodata/1/pubpaa/USO8_PUBCOMB.pep:*
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                                                                                             April 6, 2005, 13:44:50 ; Search time 139
              GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                   192
1 YEVHPYGTLPVGPGPEFKTTLRVQNLGCYVVSGLI 35
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US-10-443-622-133

US-10-106-698-7462

US-10-424-599-238025

US-10-425-869A-148

US-10-425-869A-148

US-10-462-262-372

US-10-400-608A-71

US-10-371-067-2

US-09-864-761-39770

US-09-864-761-39770

US-09-843-676-208

US-09-439-486-208

US-09-439-486-208
                                                                                                                                                                                                                                                                                Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                     1418010 segs, 331997259 residues
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                                                                                                                                                      US-09-647-544-2_COPY_952_986
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Maximum Match 100%
Listing first 45 summaries
                                                                   OM protein - protein search, using sw model
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Gapop 10.0 , Gapext 0.5
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Но
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No.
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RESULT 1

US-10-424-599-185421

US-10-424-599-185421

Sequence 185421, Application US/10424599

Publication No. U320040031072A1

GENERAL INFORMATION:
APPLICANT: La Rosa Thomas J

APPLICANT: Zono Yibus

APPLICANT: Zono Yibus

TITLE OF INVENTION: Soy Nucleic Acid Molecules and Other Molecules Associated With

TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement

TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement

CURRENT FILING DATE: 2003-04-28

CURRENT FILING DATE: 2003-04-28

CURRENT FILING DATE: 2003-04-28

SEQ ID NO 185421

LENGTH: 35

TYPE: PRT

OGENIUM GIYCINE MAX

FEATURE:
COTHER INFORMATION: Clone ID: PAT_MRT3847_13844C.1.pep

US-10-424-599-185421

QUETY MATCH

MATCHES 9; CONSETVATES

OGENIUM SET OF S
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APPLICANT: La Rosa Thomas J
APPLICANT: La Rosa Thomas J
APPLICANT: Exovalic David K
APPLICANT: Should be s
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APPLICANT: Wu, Qi-Long
APPLICANT: Wu, Qi-Long
APPLICANT: Stochl, Mark
APPLICANT: Stochl, Mark
APPLICANT: Stochl, Mark
APPLICANT: Ranschoff, Thomas C.
APPLICANT: Porter, W. Daniel (deceased)
TITLE OF INVENTION: PROFYPETIDES
TITLE OF INVENTION: PLYPEPTIDES
TITLE OF INVENTION: POLYPEPTIDES
TITLE OF INVENTION: DALLOG-001
CURRENT APPLICATION NUMBER: US/10/125,869A
CURRENT APPLICATION NUMBER: 60/284,534
PRIOR PILING DATE: 2001-0418
NUMBER OF SEQ ID NOS: 200
SOFTWARE: PastSEQ for Windows Version 4.0
SEQ ID NO 148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OTHER INFORMATION: Clone ID: PAT_MRT3847_56963C.1.pep
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 42; DB 15;
Pred. No. 2.3e+02;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0; Mismatches
                                                                                                                                                                                                                                     ; Sequence 238025, Application US/10424599; Publication No. US20040031072A1; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 148, Application US/10125869A
Publication No. US20030199671A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             21.9%;
             4 HPYGTL--PVGPGPEF 17
                                                  11 HYFGKLVPPAGTGPEF 26
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ORGANISM: Artificial Sequence
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Best Local Similarity 70.0
Matches 7; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-424-599-238025
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US-10-125-869A-148
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TITLE OF INVENTION: Colon and Colon Cancer Associated Polynucleotides and Polypeptide
CURRENT APPLICATION NUMBER: US/10/106,698
CURRENT FILING DATE: 2002-03-27
PRIOR APPLICATION NUMBER: PCT/US00/26524
PRIOR PLING DATE: 1999-09-28
PRIOR PLING DATE: 1999-09-28
PRIOR PLING DATE: 1999-09-29
PRIOR PLING DATE: 1999-09-29
PRIOR PLING DATE: 1999-09-29
PRIOR PLING DATE: 1999-09-29
PRIOR PILING DATE: 1999-09-29
SEQ ID NOS: 8564
SOFTWARE: PATENTIN VET: 3.0
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OTHER INFORMATION: Xaa equals any of the naturally occurring L-amino acids
NAME/KEY: MISC_FEATURE
LOCATION: (6)
OTHER INFORMATION: Xaa equals any of the naturally occurring L-amino acids
NAME/KEY: MISC_FEATURE
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Pred. No. 1.1e+02;
APPLICANT: Carrer et al.
TITLE OF INVENTION: 19 Human Secreted Proteins
FILE REPERENCE: PZOO918
CURRENT APPLICATION NUMBER: US/10/443,622
CURRENT FILING DATE: 2003-05-23
PRIOR APPLICATION NUMBER: PCT/US99/13608
PRIOR FILING DATE: 1998-06-30
PRIOR FILING DATE: 1997-00-01
PRIOR FILING DATE: 1997-01
PRIOR FILING DATE: 1997-01
PRIOR FILING DATE: 1997-09-12
PRIOR APPLICATION NUMBER: 60/058,63
PRIOR APPLICATION NUMBER: 60/058,598
PRIOR APPLICATION NUMBER: 60/058,598
PRIOR APPLICATION NUMBER: 60/058,598
PRIOR PILING DATE: 1997-09-12
NUMBER: OF SEQ. ID NOS: 156
SOOTWARR: PALENTIN OFF: 2.0
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; Sequence 7462, Application US/10106698

; Publication No. US20030109690A1

; GENERAL INFORMATION:
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Best Local Similarity 42.1
Matches 8; Conservative
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ORGANISM: Homo sapiens
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Best Local Similarity
Matches 9; Conserva
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LENGTH: 28
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ORGANISM: artificial
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                                                                                                                                                                                                                                                                                                                                                                                                                    ; OTHER INFORMATION: immunoglobulin binding polypeptide US-10-462-262-372
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: PRT ORGANISM: human immunodeficiency virus type 1
Squence 372, Application US/10462262
Publication No. US20040009534A1
GENERAL INFORMATION:
APPLICANT: Sato, Aaron K.
TITLE OF INVENTION: PROTEIN ANALYSIS
FILE REFERENCE: 10280-052001
CURRENT APPLICATION NUMBER: US/10/462,262
CURRENT FILING DATE: 2002-06-16
PRIOR PPLICATION NUMBER: US 60/388,642
                                                                                                                                                                                                                                                 NUMBER OF SEQ ID NOS: 430
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 372
LENGTH: 23
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US-10-080-608A-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-080-608A-71;
Sequence 71, Application US/10080608A; Publication No. US20030198956A1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             11 VGPGPEFKTTLRVQNLGC 28
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ORGANISM: Artificial Sequence
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APPLICANT: Penn, Sharron G.
APPLICANT: Penn, Sharron G.
APPLICANT: Penn, Sharron G.
APPLICANT: Rank, David R.
APPLICANT: Hanzel, David K.
APPLICANT: Hanzel, David K.
APPLICANT: Hanzel, David K.
APPLICANT: Hanzel, David K.
TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC ACID PROBES USEFUL FOR TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC ACID PROBES USEFUL FOR TILLE OF INVENTION NUMBER: US 60/180, 312
PRIOR APPLICATION NUMBER: US 60/180, 312
PRIOR APPLICATION NUMBER: US 60/207, 456
PRIOR PILING DATE: 2000-08-03
PRIOR PILING DATE: 2000-08-03
PRIOR PILING DATE: 2000-09-04
PRIOR PILING DATE: 2001-01-04
PRIOR PILING DATE: 2001-01-30
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APPLICANT: Williams, Mark K

APPLICANT: Goldberg, Edward B

TITLE OF INVENTION: Nanostructures containing antibody assembly subunits
FILE REFERENCE: NANF.P.003

CURRENT APPLICATION NUMBER: 105/10/371,067

CURRENT APPLICATION NUMBER: 100/080,608

PRIOR PILING DATE: 2002-02-21

PRIOR APPLICATION NUMBER: 10/136,225

PRIOR APPLICATION NUMBER: 00/136,225

PRIOR PILING DATE: 2002-04-29

PRIOR PILING DATE: 1999-01-25

PRIOR PILING DATE: 1999-01-25

PRIOR PILING DATE: 1999-01-25

PRIOR PILING DATE: 1995-10-12

PRIOR FILING DATE: 1994-10-13

NUMBER OF SEQ ID NOS: 10

SOFTWARE: Patentin version 3.2

LENGTH: 24
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; CTHER INFORMATION: Xaa can be any naturally occurring amino acid US-10-371-067-2
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PRIOR FILING DATE: 2001-01-30
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Gaps
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OTHER INFORMATION: EXPRESSED IN BT44, SIGNAL = 1.9
OTHER INFORMATION: EXPRESSED IN HACKNIA, SIGNAL = 1.1
OTHER INFORMATION: EXPRESSED IN HBL100, SIGNAL = 1.9
OTHER INFORMATION: EXPRESSED IN HBL1, SIGNAL = 1.9
OTHER INFORMATION: EXPRESSED IN HBL1, SIGNAL = 1.2
OTHER INFORMATION: EXPRESSED IN BONE MARROW, SIGNAL = 1.0
OTHER INFORMATION: EXPRESSED IN BONE MARROW, SIGNAL = 1.0
OTHER INFORMATION: EST_HUMAN HIT: AL121516.1, EVALUE 8.00e-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Andrews, William H.
TITLE OF INVENTION: No. US20020164786A1el Telomerase
NUMBER OF SEQUENCES: 225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: ISM PC COMPATIBLE
SOFTWARE: PatentIn Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CORRESPONDENCE ADDRESS:
ADDRESSEE: Townsend and Townsend and Crew LLP
STREET: Two Embarcadero Center, 8th Floor
                                                                                                                       PRIOR FILING DATE: 2001-01-30
PRIOR APPLICATION NUMBER: PCT/USO1/00668
PRIOR PILING DATE: 2001-01-30
PRIOR PLING DATE: 2001-01-30
PRIOR PLICATION NUMBER: PCT/USO1/00663
PRIOR PLICATION NUMBER: PCT/USO1/00662
PRIOR PLICATION NUMBER: PCT/USO1/00661
PRIOR PLICATION NUMBER: PCT/USO1/00661
PRIOR PLICATION NUMBER: PCT/USO1/00661
PRIOR PLICATION NUMBER: PCT/USO1/00661
PRIOR PLICATION NUMBER: PCT/USO1/00670
PRIOR PLICATION NUMBER: US 60/234,687
PRIOR PLICATION NUMBER: US 09/608,408
PRIOR PLICATION NUMBER: US 09/608,408
PRIOR PLICATION NUMBER: US 09/774,203
PRIOR PLICATION NUMBER: US 09/774,203
PRIOR PLICATION NUMBER: US 09/774,203
PRIOR PRIOR DATE: 2001-01-29
NUMBER OF SEQ ID NOS: 49117
SOCTHWARR: Andromax Sequence Listing Engine vers. 1.1
SEQ ID NO 46555
LENGTH: 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 39; DB 9; I
Pred. No. 3.4e+02;
1; Mismatches 3;
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COMPUTER READABLE FORM:
                                                          FILING DATE: 2001-01-30
APPLICATION NUMBER: PCT/US01/00665
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MAP TO AC009973.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; Sequence 208, Application US/09843676; Patent No. US20020164786A1; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Cech, Thomas R.
Lingner, Joachim
Nakamura, Toru
Chapman, Karen B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2 EVHPYGTLPVGPGPEFKTT 20
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Harley, Calvin
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STATE: California
                                                                                                             FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity 57.9°
Matches 11, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-864-761-46555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-843-676-208
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OTHER INFORMATION: EXPRESSED IN PLACENTA, SIGNAL = 1.4
OTHER INFORMATION: EXPRESSED IN FEAL LIVER, SIGNAL = 1.1
OTHER INFORMATION: EXPRESSED IN BRAIN, SIGNAL = 0.9
OTHER INFORMATION: EXPRESSED IN ADULT LIVER, SIGNAL = 1.1
OTHER INFORMATION: EXPRESSED IN LUNG, SIGNAL = 0.79
OTHER INFORMATION: EXPRESSED IN BONE MARROW, SIGNAL = 1.1
OTHER INFORMATION: EXPRESSED IN BONE MARROW, SIGNAL = 1.1
OTHER INFORMATION: EST_HUMAN HIT: H87835.1, EVALUE 2.00e-06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20.3%; Score 39; DB 9; Length 20;
58.3%; Pred. No. 3.3e+02;
iive 1; Mismatches 4; Indels
PRIOR FILING DATE: 2001-01-30
PRIOR APPLICATION NUMBER: PCT/US01/00668
PRIOR FILING DATE: 2001-01-30
PRIOR FILING DATE: 2001-01-30
PRIOR FILING DATE: 2001-01-30
PRIOR PILING DATE: 2001-01-30
PRIOR PPLICATION NUMBER: PCT/US01/00662
PRIOR PPLICATION NUMBER: PCT/US01/00661
PRIOR APPLICATION NUMBER: PCT/US01/00670
PRIOR APPLICATION NUMBER: PCT/US01/00670
PRIOR APPLICATION NUMBER: US 60/234,687
PRIOR APPLICATION NUMBER: US 60/234,687
PRIOR PILING DATE: 2000-09-21
PRIOR PILING DATE: 2000-09-21
PRIOR PILING DATE: 2000-09-30
PRIOR PILING DATE: 2000-09-30
PRIOR PILING DATE: 2000-09-30
PRIOR FILING DATE: 2000-09-30
PRIOR FILING DATE: 2001-01-29
NUMBER OF SEQ ID NOS: 49117
SEQ ID NO 39770
LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OTHER INFORMATION: MAP TO AC005747.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity 58.3
Matches 7; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4 HPYGTLPVGPGP 15
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ORGANISM: Homo sapiens
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Gaps
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Lingner, Joachim
Lingner, Joachim
Nakamura, Toru
Chapman, Karen B.
Morin, Greeg B.
Harley, Calvin
Andrews, William H.
TITLE OF INVENTION: No. US20030032075Alel Telomerase
NUMBER OF SEQUENCES: 225
CORRESPONDENCE ADDRESS:
STREET: Two Embarcadero Center, 8th Floor
CITY: San Francisco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COUNTY: United States of America
ZIP: 94111
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: 1BM PC compatible
COMPRATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:

TAPPLICATION NUMBER: US/10/053,758
FILING DATE: 18-Jan-2002
CLASSIFTCATION: 536
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/854,050
FILING DATE: 09-MAY-1997
APPLICATION NUMBER: US 08/851,843
FILING DATE: 06-MAY-1997
APPLICATION NUMBER: US 08/851,843
FILING DATE: 06-MAY-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 39; DB 10;
Pred. No. 3.8e+02;
0; Mismatches 5;
                                          FILING DATE: 25-APR-197
CLASSIPTCATION: 536
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/844,419
FILING DATE: 18-APR-1997
CLASSIFTCATION: 536
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/724,643
FILING DATE: 01-0C-1996
CLASSIFTCATION NUMBER: US 08/724,643
FILING DATE: 01-0C-1996
TLING DATE: 01-0C-1996
TELECOMUNICATION: S36
ATTORNEY/AGENT INFORMATION:
NAME: APDI- Randolph T.
REFERENCE/DOCKET NUMBER: 015389-002931US
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION SEQ ID NO: 208:
SEQUENCE CHARACTERISTICS:
LENGTH: 23 amino acide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-053-758-208
; Sequence 208, Application US/10053758
; Publication No. US20030032075A1
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20.3%;
58.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4 HPYGTLPVGPGP 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TOPOLOGY: linear MOLECULE TYPE: peptide
    PRIOR APPLICATION DATA: APPLICATION NUMBER: 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: amino acid STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-438-486-208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 13
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Cech, Thomas R.
APPLICANT: Lingner, Joachim
APPLICANT: Nakamura, Toru
APPLICANT: Nakamura, Toru
APPLICANT: Morin, Gregg B.
APPLICANT: Harley, Calvin
APPLICANT: Harley, Calvin
APPLICANT: Andrews, William H.
TITLE OF INVENTION: No. US20030009019Alel Telomerase
NUMBER OF SEQUENCES: 223
KORRESPONDENCE ADDRESS:
ADDRESSER: Twonsend and Townsend and Crew LLP
STREET: Two Embarcadero Center, 8th Floor
                                                                               PRIOR APPLICATION DATA:

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US/08/854,050
FILING DATE: 09-MAY-1997
APPLICATION NUMBER: US 08/846,017
FILING DATE: 25-APR-1997
APPLICATION NUMBER: US 08/844,419
FILING DATE: 18-APR-1997
APPLICATION NUMBER: US 08/724,643
FILING DATE: 01-OCT-1996
ATTORNEY/AGENT INFORMATION:

REGISTRATION NUMBER: 36,429
REGISTRATION NUMBER: 36,429
REGISTRATION NUMBER: 36,429
REFERENCE/DOCKET NUMBER: 015389-002930US
TELEPHONE: (415) 576-0200
TELEPAK: (415) 576-0200
TELEPAK: (415) 576-0200
TELEPHONE: (415) 576-0200
TELEPHONE: CHARACTERISTICS:

LENGTH: 23 amino acids

LENGTH: 23 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CITY: San Francisco
STATE: California
COUNTRY: United States of America
ZIP: 94111-3834
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/438,486
FILLING DATE: 12-NOV-1999
                           APPLICATION NUMBER: US/09/843,676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TOPOLOGY: linear
NOLECULE TYPE: peptide
SEQUENCE DESCRIPTION: SEQ ID NO: 208:
US-09-843-676-208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/851,843
FILING DATE: 06-MAY-1997
CLASSIFICATION: 536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 208, Application US/09438486
Publication No. US20030009019A1
GENERAL INFORMATION:
                                                 FILING DATE: 26-Apr-2001
CLASSIFICATION: 536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: amino acid
STRANDEDNESS: <Unknown>
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity 58.3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4 HPYGTLPVGPGP 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9 HPRENLPQDPGP 20
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US-09-438-486-208
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Gaps

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COMPUTER READABLE FORM:
MEDIUM TYPE: Ploppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
FILING DATE: 18-Jan-2002
CLASSIFCATION: 536
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                          Length 23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Andrews, William H.
TITLE OF INVENTION: No. US20030059787A1el Telomerase
NUMBER OF SEQUENCES: 225
                                                                                                                                                                                                                                                                                                                                                                        Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME: Apple, Randolph T.
REGISTRATION NUMBER: 36,429
REFERENCE/DOCKET NUMBER: 015389-002930US
REFERENCE/DOCKET NUMBER: 015389-002930US
                                                                                                                                                                                                                                                                                                                       20.3%; Score 39; DB 14;
58.3%; Pred. No. 3.8e+02;
tive 0; Mismatches 5,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 08/854,050
FILING DATE: «Unknown»
APPLICATION NUMBER: US 08/846,017
FILING DATE: 25-APR-1997
APPLICATION NUMBER: US 08/844,419
FILING DATE: 18-APR-1997
APPLICATION NUMBER: US 08/724,643
FILING DATE: 01-OCT-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STATE: California
COUNTRY: United States of America
                                                                                                                                              TYPE: amino acid
STRANDEDNESS: <UNKnown>
TOPOLOGY: linear
MOLECULE TYPE: peptide
SEQUENCE DESCRIPTION: SEQ ID NO: 208:
US-10-054-295-208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 208, Application US/10054611
| Publication No. US20030059787A1
| GENERAL INFORMATION:
| APPLICANT: Cach, Thomas R. |
| Ingner, Joachim |
| Nakamura, Toru |
| Chapman, Karen B. |
| Morin, Gregg B. |
| Harley, Calvin |
                     TELECOMMUNICATION INFORMATION:
TELEBHONE: (415) 576-0200
TELEFAX: (415) 576-0300
INFORMATION FOR SEQ ID NO: 208:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CORRESPONDENCE ADDRESS:
ADDRESSEE: Townsend and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 INFORMATION FOR SEQ ID NO: 208:
SEQUENCE CHARACTERIFICS:
LENGTH: 23 amino acids
TYPE: amino acid
                                                                                                                 SEQUENCE CHARACTERISTICS:
LENGTH: 23 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CITY: San Francisco
                                                                                                                                                                                                                                                                                                                                                                        7; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                     4 HPYGTLPVGPGP 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HPRENLPODPGP 20
                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
Matches 7; Conserv
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CITY: San Francisco
CITY: San Francisco
CITY: California
COUNTRY: United States of America
ZIP: 94111
COMPUTER READABLE FORM:
MUDIUM TYPE: Floppy disk
COMPUTER: Tale PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/054,295
FILING DATE: 18-Jan-2002
CLASSIFICATION: 536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20.3%; Score 39; DB 14; Length 23; 58.3%; Pred. No. 3.8e+02; ive 0; Mismatches 5; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Lingner, Joachim
Nakamura, Toru
Chapman, Kazen B.
Morin, Gregg B.
Harley, Calvin
Andrews, William H.
TITLE OF INVENTION: No. US20030044953Alel Telomerase
NUMBER OF SEQUENCES: 225
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADDRESSEE: Townsend and Townsend and Crew LLP STREET: Two Embarcadero Center, 8th Floor
                                                                                                                           NAME: Apple, Randolph T.
REGISTRATION NUMBER: 36,429
REFERENCE/DOCKET NUMBER: 015389-002930US
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 576-0200
TELEFAT: (415) 576-0300
INFORMATION FOR SEQ ID NO: 208:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION DATA:

APPLICATION NUMBER: 08/854,050
FILING DATE: «Uhrboun»
APPLICATION NUMBER: US 08/846,017
FILING DATE: 25-APR-1997
APPLICATION NUMBER: US 08/844,419
FILING DATE: 18-APR-1997
APPLICATION NUMBER: US 08/724,643
FILING DATE: 01-OCT-1996
ATTORNEY/AGENT INFORMATION:
REGISTRATION NUMBER: 36,429
                   APPLICATION NUMBER: US 08/844,419
FILING DATE: 18-APR-1997
APPLICATION NUMBER: US 08/724,643
FILING DATE: 01-OCT-1996
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                              MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION: SEQ ID NO: 208:

US-10-053-758-208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 208, Application US/10054295
Publication No. US20030044953A1
GENERAL INFORMATION:
APPLICANT: Cech, Thomas R.
FILING DATE: 25-APR-1997
                                                                                                                                                                                                                                                                                                                                                                     STRANDEDNESS: <Unknown>
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                       LENGTH: 23 amino acids
                                                                                                                                                                                                                                                                                                                                                  TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity 58.3
Matches 7, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4 HPYGTLPVGPGP 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9 HPRENLPQDPGP 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 14
US-10-054-295-208
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: amino acid
STRANDEDNESS: single
; TOPOLOGY: linear
US-08-257-528B-84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
Matches 9; Conservat
                                                                                                                                                                                                                                                                                                                                          STATE: Ontario
COUNTRY: Canada
ZIP: MSG 1R7
STREET: Suite
CITY: Toronto
                                                                                                                                                                                                                       US-08-257-528B-84
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                                                                                                                                                                                                                                                                                                                                                                                                                             Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
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62.208 Million cell updates/sec
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1. \cgn2_6\ptodaca1/iaa/5A_COMB.pep:*

2. \cgn2_6\ptodaca1/iaa/5B_COMB.pep:*

3. \cgn2_6\ptodaca1/iaa/6A_COMB.pep:*

4: \cgn2_6\ptodaca1/iaa/6B_COMB.pep:*

5: \cgn2_6\ptodaca1/iaa/PCTUS_COMB.pep:*

6: \cgn2_6\ptodaca1/iaa/PCTUS_COMB.pep:*

6: \cgn2_6\ptodaca1/iaa/PCTUS_COMB.pep:*
        GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
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1 YEVHPYGTLPVGPGPEFKTTLRVQNLGCYVVSGLI 35
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US-08-460-602A-84
US-08-465-217A-84
US-08-465-217A-84
US-08-465-207A-84
US-08-467-881A-84
US-08-467-858B-83
US-08-217A-83
US-08-467-858B-83
US-08-460-602A-83
US-08-460-602A-83
US-08-460-602A-83
US-08-460-602A-83
US-08-460-602A-83
US-08-461-296A-83
US-08-461-296A-81
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US-08-461-29A-81
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US-08-465-217A-81
US-08-464-3129A-81
US-08-467-881A-81
US-08-467-881A-81
US-08-467-602A-50
US-08-463-966A-50
US-08-463-966A-50
US-08-465-217A-50
                                                                                                                                                                                 Total number of hits satisfying chosen parameters:
                                                                                                                                                                513545 segs, 74649064 residues
                                                                                                                                                                                                                                                                                                                                                                               SUMMARIES
                                                                                                 US-09-647-544-2_COPY_952_986
                                                                                                                                                                                                                             Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                             OM protein - protein search, using sw model
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Gapop 10.0 , Gapext 0.5
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Match Length DB
                                                                                                                                                                                                   Minimum DB seq length: 0
Maximum DB seq length: 35
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                                                                                                                                      Scoring table:
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Sequence Seq
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
MCDIUM TYPE: Floppy disk
COMPUTER: READABLE FORM:
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: PatentIn Release #1.0, Version #1.25
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/257,528B
FILING DATE: 09-JUN-1994
CLASSIFICATION NUMBER: 24,973
RETESTRENCE OF WINDER: 24,973
REFERENCE COMPUTERION:
TELEFONE: (416) 595-1155
TELEFONE: (416) 595-1163
TELEFAX: (416) 595-1163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: SIA, Charles D.Y.
APPLICANT: CHONG, Pele
APPLICANT: CHONG, Pele
APPLICANT: KLEIN, Michel H.
TITLE OF INVENTION: Tandem Synthetic HIV-1 Peptides
NUMBER OF SEQUENCES: 101
CORRESPONDENCE ADDRESS:
ADDRESSEE: Sim & McBurney
STREET: Suite 701, 330 University Avenue
                                                      US-08-467-881A-50
US-08-513-968-71
US-08-513-968-71
US-08-257-528B-41
US-08-460-602A-81
US-08-460-602A-81
US-08-465-966A-81
US-08-465-217A-41
US-08-465-217A-80
US-08-465-217A-80
US-08-465-217A-80
US-08-465-217A-80
US-08-464-329A-80
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Pred. No. 8.7;
7; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-08-462-507A-41
US-08-462-507A-80
US-08-467-881A-41
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Patent No. 5639854
GENERAL INFORMATION:
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Patent No. 5800822

GENERAL INFORMATION:
APPLICANT: SIA, Charles D.Y.
APPLICANT: KLEIN, Michel H.
TITLE OF INVENTION: Tandem Synthetic HIV-1 Peptides
NUMBER OF SEQUENCES: 101
CORRESPONDENCE ADDRESS:
ADDRESSEE: Sim & McBurney
STREET: Suite 701, 330 University Avenue
CITY: Toronto
STATE Ontario
                                                                                                MEDIUM TYPE: Fighy disk

CMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOUTHWER BEACHILD Release #1.0, Version #1.25

SOUTHWENT APPLICATION DATA:

APPLICATION NUMBER: US/08/463,966A

FILING DATE: 05-JUN-1995

CLASSIFICATION NUMBER: 08/257,528

FILING APPLICATION BATA:

APPLICATION NUMBER: 08/03,378

FILING APPLICATION: 424

PRIOR APPLICATION NUMBER: 08/073,378

FILING BATE: 09-JUN-1993

CLASSIFICATION: 424

ATTORNEY/AGRT INPORMATION:

NAME: STEWART, MICHAEL I.

REGISTRATION NUMBER: 1038-487 MIS:jb

TELECOMMUTICATION INFORMATION:

TELEBHONE: (416) 595-1155

TELEFRAX: (416) 595-1163

INFORMATION FOR SEQ ID NO: 84:

SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/465,217A
FILING DATE: 05-UN-1995
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
RAPLICATION NUMBER: 08/257,528
FILING DATE: 09-UN-1994
CLASSIFICATION: 424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 46; DB 3 Pred. No. 8.7; 7; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S SIPIGPGRAFYTTGYKYKVVKIBPLG 30
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 34.6%;
Matches 9; Conservative 7
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LENGTH: 33 amino acids
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ZIP: M5G 1R7
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy of
                        ZIP: MSG 1R7
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: amino acid
STRANDEDNESS: sin
TOPOLOGY: linear
Canada
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                              Jeaquence 84, Application US/08460602A

| Sequence 84, Application US/08460602A
| Patent No. 575969
| GRNERAL INFORMATION: APPLICANT: CHONG, Pele
| APPLICANT: CHONG, Pele
| APPLICANT: CHONG, Pele
| APPLICANT: CHONG, Pele
| TITLE OF INVENTION: Tandem Synthetic HIV-1 Peptides
| OORRESPENDENCE ADDRESS: 101
| CORRESPONDENCE ADDRESS: 103
| CORRESPONDENCE ADDRESS: 104
| CONTRY: Tanconto CITY: Tanconto GITATE: Onterio GITATE: Onterio
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       24.0%; Score 46; DB 1; Length 33; illarity 34.6%; Pred. No. 8.7; Conservative 7; Mismatches 4; Indela
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Patent No. 5795955
RENERAL INFORMATION:
APPLICANT: SIAN SELECTION:
APPLICANT: KLEIN, Michel H.
TITLE OF INVENTION: Tandem Synthetic HIV-1 Peptides
NUMBER OF SEQUENCES: 101
CORRESPONDENCE ADDRESS:
ADDRESSEE: SIM & MCBurney
GTRY: Toronto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          7; Mismatches
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INFORMATION FOR SEQ ID NO: 84,
SEQUENCE CHARACTERISTICS:
LENGTH: 33 amino acids
TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
Matches 9; Conserva
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US-08-460-602A-84
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                                                                                           Length 33;
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                                                                                                                                                                                                                                                                                       RESULT 6
US-08-462-507A-84
; Sequence 84, Application US/08462507A
; Patent No. 5876731
; GENERAL INFORMATION:
APPLICANT: SIA, Charles D.Y.
APPLICANT: KLEIN, Michel H.
TITLE OF INVENTION: Tandem Synthetic HIV-1 Peptides
NUMBER OF SEQUENCES: 101
CORRESPONDENCE ADDRESS:
ADDRESSEE: Sim & McBurney
STREET: Suite 701, 330 University Avenue
CITY: Toronto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STATE: CONTEXT Canada
ZIP: MSG INTEXTO
COMPUTER: Eachada
ZIP: MSG INTEXT CANADALE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/462,507A
FILING DATE: 05-JUN-1995
CLASSIFICATION NUMBER: 08/257,528
FILING DATE: 09-JUN-1994
CLASSIFICATION NUMBER: 08/257,528
FILING DATE: 09-JUN-1994
CLASSIFICATION NUMBER: 08/257,528
FILING DATE: 09-JUN-1994
CLASSIFICATION NUMBER: 08/2073,378
FILING DATE: 09-JUN-1993
CLASSIFICATION: 424
CLASSIFICATION: 424
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                                                                                           DB 2;
                                                                                         24.0%; Score 46; DB 34.6%; Pred. No. 8.7; tive 7; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pred. No. 8.7; 7; Mismatches
                                                                                                                                                                                                         SIPIGPGRAPYTTGYKYKVVKIEPLG 30
                                                                                                                                                                                  8 TLPVGPGPEFKTT-----LRVQNLG 27
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATTORNEY/AGENT INPORMATION:
NAME: STEWART, MICHAEL I
REGISTRATION NUMBER: 24,973
REFRENCE/DOCKET NUMBER: 1038
TELECOMMUNICATION INFORMATION:
TELEPHONE: (416) 595-1155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEFAX: (416) 595-1163
INFORMATION FOR SEQ ID NO: 8
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                : 33 amino acids
amino acid
                                                                                           Query Match
Best Local Similarity 34.6
Matches 9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9; Conservative
    single
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Best Local Similarity
; STRANDEDNESS: sin
; TOPOLOGY: linear
US-08-464-329A-84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    linear
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-08-462-507A-84
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US-08-467-881A-84
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VES-01.5

VES-01.5

VES-01.5

VES-01.5

VES-01.5

VESTIGATE: 817.54

GENERAL INFORMATION:

APPLICANT: SIA, Charles D.Y.

APPLICANT: CHONG, Pele

ATTLE OF INVENTION: Tandem Synthetic HIV-1 Peptides

NUMBER OF SEQUENCES: 101

CORRESSED: Sinke McBurney

STREET: Suite 701, 330 University Avenue

CITY: Toronto

COUNTRY: Canada

ZIP: MSG 1R7

COMPUTER READABLE FORM:

MSDIUM TYPE: Floppy disk

COMPUTER READABLE FORM:

MSDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTAME: Detentin Release #1.0, Version #1.25

CURRENT APPLICATION NUMBER: US/08/464,329A

FILING DATE: 05-UN-1994

CLASSIFICATION NUMBER: 08-207-38

FILING DATE: 09-UN-1993

CLASSIFICATION NUMBER: 09-UN-1993

CLASSIFICATION NUMBER: 24,973

REGISTRATION NUMBER: 24,973

REGISTRATION NUMBER: 24,973

REGISTRATION NUMBER: 1038-449 MIS:jb

TELEPHONE: (416) 595-1163

INFORMATION POR SEQ ID NO: 84:

SEQUENCE CHARACTERISTICS:

LEBROTH: 33 amino acide

TYPE: amino acide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8 TLPVGPGPEFKTT-----LRVQNLG 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     s sipigpgrafytrgykykvykiepig 30
                APPLICATION NUMBER: 08/073,378
FILING DATE: 09-UJN-1993
CLIASSIFICATION: 424
ATTORNEY/AGENT INFORMATION:
NAME: STEWART MICHAEL I
REGISTRATION NUMBER: 24,973
REFERENCE/DOCKET NUMBER: 1038-486
TELEPHONE: (416) 595-1155
TELEPHONE: (416) 595-1163
INFORMATION FOR SEQ ID NO: 84:
SEQUENCE CHARACTERISTICS:
LEGTH: 33 amino acide
TYPE: sequences: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
  PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                           ; TOPOLOGY: linear
US-08-465-217A-84
                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
Matches 9; Conserve
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Gaps

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                                                                                                                                                                                                                                                                                                                                         DB 3; Length 34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-08-257-528B-83

Sequence 83, Application US/08257528B

Patent No. 5639854

GENERAL INFORMATION:
APPLICANT: CHONG, Pele
TILLE OF INVENTION: Tandem Synthetic HIV-1 Peptides
NUMBER OF SEQUENCES: 101
CORRESPONDENCE ADDRESS:
ADDRESSEE: Sim & McBurney
STREET: Suite 701, 330 University Avenue
CITY: Toronto
STATE: Ontario
COUNTRY: Canada
ZIP: MSG 1RP
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 45.5; D
Pred. No. 10;
5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                  4; Mismatches
                                                                                                                                                                                                                                                                                                                                             Score 46;
Pred. No. 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2 EVHPYG-----TLPVGPGPEFKTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-08-460-602A-83
; Sequence 83, Application US/08460602A
; Patent No. 5759769
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      :::||| |:|| |:|
11 SISIGPGRAFRTTQIVGNL 29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8 TLPVGPGPEFKTTLRVQNL 26
EARLIER FILING DATE: 1998-06-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 23.7%;
Best Local Similarity 34.6%;
Matches 9; Conservative
                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity 47.4%;
Matches 9; Conservative
                                      NUMBER OF SEQ ID NOS: 16
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 11
LENGTH: 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
US-08-257-528B-83
                                                                                                                                                                              TYPE: PRT

ORGANISM: Homo sapiens

US-09-141-833-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          원
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APPLICANT: OFFORD, ROBIN E
APPLICANT: THOMPSON, DARREN
APPLICANT: THOMPSON, DARREN
APPLICANT: WILKEN
TITLE OF INVENTION: N-TERMINAL MODIFICATIONS OF RANTES AND METHODS OF USE
FILE REFERENCE: GRFN-0.26/03US
CURRENT PAPLICATION NUMBER: US/09/141,833
CURRENT FILING DATE: 1998-08-28
EARLIER APPLICATION NUMBER: 60/056,292
EARLIER APPLICATION NUMBER: 60/056,292
EARLIER PILING DATE: 1998-03-13
EARLIER FILING DATE: 1998-03-13
EARLIER FILING DATE: 1998-03-13
EARLIER PILING DATE: 1998-03-13
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER: LBM FC DOCKAGE DOS
SOPERATING SYSTEM: PC-DOS/MG-DOS
SOPETWARE Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/467,881A
FILING DATE: 06-JUN-1995
CLASSIFICATION NUMBER: 08/257,528
FILING DATE: 09-JUN-1994
CLASSIFICATION NUMBER: 08/073,378
FILING DATE: 09-JUN-1993
CLASSIFICATION NUMBER: 09-JUN-1993
CLASSIFICATION NUMBER: 09-JUN-1993
CLASSIFICATION NUMBER: 09-JUN-1993
TLING DATE: 09-JUN-1993
CLASSIFICATION NUMBER: 1038-488 MIS:jb
TELECATION NUMBER: 142,973
REFERENCE/DOCKET NUMBER: 1038-488 MIS:jb
TELECHMUNICATION INFORMATION:
NAME: STEWATION NUMBER: 14,973
REFERENCE/DOCKET NUMBER: 1038-488 MIS:jb
TELECHMUNICATION INFORMATION:
TELECHMUNICATIO
                              GENERAL INFORMATION:
APPLICANT: S19, Charles D.Y.
APPLICANT: CHONG, Pele
APPLICANT: KLEIN, Michel H.
TITLE OF INVENTION: Tandem Synthetic HIV-1 Peptides
NUMBER OF SEQUENCES: 101
CORRESPONDENCE ADDRESS:
ADDRESSEE: Sim & McBurney
STREET: Suite 701, 330 University Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       24.0%; Score 46; DB 34.6%; Pred. No. 8.7; tive 7; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY: Canada
ZIP: MSG 1R7
COUNTRY: Canada
ZIP: MSG 1R7
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPAT
Sequence 84, Application US/08467881A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 11, Application US/09141833
Patent No. 6168784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 34.67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               , TOPOLOGY:
US-08-467-881A-84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-141-833-11
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SERVET: SIA, Charles D.Y.
APPLICANT: CRIN, Michel H.
TITLE OF INVENTION: Tandem Synthetic HIV-1 Peptides
NUMBER OF SEQUENCES: 101
CORRESPONDENCE ADDRESS:
ADDRESSEE: Sim & McBurney
STREET: Suite 701, 330 University Avenue
CITY: Toronto
COUNTRY: Canada
ZIP: MGG 1RT
COMPUTER: READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: DATE: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/465,217A
FILING DATE: 08-UUN-1995
CLASSIFICATION NUMBER: 08/257,528
FILING DATE: 09-UUN-1994
CLASSIFICATION NUMBER: 08/03,378
FILING DATE: 09-UUN-1994
CLASSIFICATION NUMBER: 08/073,378
FILING DATE: 09-UUN-1903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
             NYSTEM: PC-DOS/MS-DOS
PatentIn Release #1.0, Version #1.25
                                                          SOFTWARE: PATCATION DATA:

CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/463,966A
FILING DATE: 05-UUN-1995
CLASSIFICATION: 04-24
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/257,528
FILING DATE: 09-UIN-1994
CLASSIFICATION: 424
PRIOR APPLICATION NUMBER: 08/257,528
FILING DATE: 09-UIN-1994
CLASSIFICATION: 424
PRIOR PAPLICATION NUMBER: 08/073,378
FILING DATE: 09-UIN-1993
CLASSIFICATION: 424
ATTORNEY/AGENT INFORMATION:
NAME: STEWART, MICHAEL I.
REGISTRATION NUMBER: 24,973
REFERENCE/DOCKET NUMBER: 1038-487 MIS:jb
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELEFAX: (416) 595-1155
TELEFAX: CARRACTERISTICS:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 23.7%; Score 45.5; Best Local Similarity 34.6%; Pred. No. 10 Matches 9; Conservative 5; Mismatche
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2 EVHPYG-----TLPVGPGPEFKTT 20
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FILING DATE: 09-UNW-1993
CLASSIFICATION: 424
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH: 33 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRANDEDNESS: single
                OPERATING SYSTEM:
SOFTWARE: Patent1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ;
US-08-463-966A-83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-08-465-217A-83
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Fatent No. 5795955
GENERAL INFORMATION:
APPLICANT: GHONG, Pele
TITLE OF INVENTION: Tandem Synthetic HIV-1 Peptides
NUMBER OF SEQUENCES: 101
CORRESPONDENCE 3.00
ADDRESSEE: Sim & McBurney
STREET: Suite 701, 330 University Avenue
                                                                                                                                                                                                                                       GTREET: SULLE 'OL, JOY COLORDIO
COUNTRY: Toronto
STATE: Oncario
COUNTRY: Canada
ZIP: MSG 1R7
COMPUTER: ELABABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/460,602A
FILING DATE: 02-UN-1995
CLASSIFICATION ATA:
APPLICATION NUMBER: 08/257,528
FILING DATE: 09-UN-1994
CLASSIFICATION NUMBER: 08/033,378
FILING DATE: 09-UN-1993
CLASSIFICATION NUMBER: 24,973
REPERBACK FOLCET INFORMATION:
NAME: STEWART, MICHAEL I.
REGISTRATION NUMBER: 24,973
REFERENCE FOLCET WINDER: 24,973
REFERENCE FOLCET WINDER: 1038-450 MIS:jb
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATI
APPLICANT: SIA, Charles D.Y.
APPLICANT: CHONG, Pele
APPLICANT: CHONG, Pele
TITLE OF INVENTION: Tandem Synthetic HIV-1 Peptides
TUTBE OF DEQUENCES: 101
CORRESPONDENCE ADDRESS:
ADDRESSEE: Sim & MCBurney
STREET: Suite 701, 330 University Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2 EVHPYG-----TLPVGPGPEFKTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7 KIEPLGVAPNTRKSIPIGPGRAFYTT 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CITY: Toronto
STATE: Ontario
COUNTRY: Canada
ZIP: MSG 1R7
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 34.6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; TOPOLOGY:
US-08-460-602A-83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-08-463-966A-83
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                                                                                                                                                                                                                                                                              Sequence 30, Application US/08462507A

Sequence 30, Application US/08462507A

Patent No. 5876731

GENERAL INFORMATION:

APPLICANT: SIA, Charles D.Y.

APPLICANT: KLEIN, Michel H.

TITLE OF INVENTION: Tandem Synthetic HIV-1 Peptides

NUMBER OF SEQUENCES: 101

CORRESPONDENCE ADDRESS:

ADDRESSEE: Sim & McBurney

STREET: Suite 701, 330 University Avenue

CITY: Toronto

STATE: Ontario

COUNTY: Canada

ZIP: MSG IN7

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk.

COMPUTENTE OF TOWN.
                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CURRENT APPLICATION DATA:
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/462,507A
PILING DATE: 09-JUN-1995
CLASSIFICATION DATA:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 09-JUN-1994
CLASSIFICATION: 424
PRIOR APPLICATION: 424
ATTORNEY/AGENT INFORMATION:
NAME: STEWART, MICHAEL I.
NAME: STEWART, MICHAEL I.
REFERENCE/DOCKET NUMBER: 1038-451 MIS:jb
TELECOMMUNICATION NUMBER: 1038-451 MIS:jb
                                                 5.
                 34.6%; Pred. No. 10; tive 5; Mismatches
                                                                                                  2 EVHPYG-----TLPVGPGPEFKTT 20
                                                                                                                                                       7 KIEPLGVAPNTRKSIPIGPGRAFYTT 32
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Patent No. 5951986
GENERAL INFORMATION:
APPLICANT: SIA, Charles D.Y.
APPLICANT: CHONG, Pele
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (416) 595-1155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEFAX: (416) 595-1163
INFORMATION FOR SEQ ID NO: 8
SEQUENCE CHARACTERISTICS:
              Best Local Similarity 34,64 Matches 9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 33 amino acids
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Matches 9; Conserve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: amino acid
STRANDEDNESS: si
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19-08-464-219A-83

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19-08-461-210A-81

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5; Indels
                                                                        1038-486 MIS: jb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2 EVHPYG-----TLPVGPGPEFKTT 20
NAME: STEWART, MICHABL 1.
REGISTRATION NUMBER: 24,973
REFERENCE/DOCKET NUMBER: 1038-.
TELECOMMUNICATION INFORMATION:
TELEPHONE: (416) 595-1163
INFORMATION FOR SEQ ID NO: 83:
SEQUENCE CHARACTERISTICS:
LENGTH: 33 amino acids
TYPE: amino acid
STRANDEBNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity 34.61
Matches 9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                             , TOPOLOGY: linear
US-08-465-217A-83
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Gaps
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APPLICANT: KLEIN, Michel H.

TITLE OF INVENTION: Tandem Synthetic HIV-1 Peptides
NUMBER OF SEQUENCES: 101
CORRESPONDENCE ADDRESS:
ADDRESSEE: Sim & McBurney
STREET: Suite 701, 330 University Avenue
CITY: Toronto
STRATE: Onteatio
COUNTRY: Canada
ZIP: M5G 1R7
COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PALORIE FORM:
MUDIUM TYPE: PC-DOS/MS-DOS
OFTWARE: PALORION TANA:
APPLICATION NUMBER: US/08/467,881A
FILING DATE: 06-JUN-1994
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/257,528
FILING DATE: 09-JUN-1994
CLASSIFICATION: 424
PRIOR APPLICATION: 424
APPLICATION NUMBER: 09/073,378
FILING DATE: 09-JUN-1993
CLASSIFICATION: 424
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2 EVHPYG-----TLPVGPGPEFKTT 20
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Search completed: April 6, 2005, 13:45:31 Job time : 43 secs

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GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
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OM protein - protein search, using sw model

Run on:

April 6, 2005, 14:42:11 ; Search time 43 Seconds (without alignments) 49.227 Million cell updates/sec

US-09-647-544-7 114 1 KLGFFAHKKIPEEEKREEKLEQ 22

Title: Perfect score: Sequence: BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

283416 segs, 96216763 residues Searched:

4267

Total number of hits satisfying chosen parameters: Minimum DB seq length: 0 Maximum DB seq length: 22

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database :

PIR 79:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

IES	Description	valine-tRNA ligase	neurofilament heav	enamelin, 26K - bo	cytochrome-c oxida	cytochrome-c oxida	Ca2+-transporting	plastoquinol-plast	alkaline phosphata	hypothetical prote	epsilon receptor m	ribosomal protein	ribosomal protein		ubiquitin carboxy]	ribosomal protein	sulfite reductase	insulin-like growt	caldesmon - turkey	2-aminobenzoate-Co		photosystem I chai	Ω		motilin - dog (ten	cytochrome-c oxida	alkanal monooxygen	neural surface pro	17H7.9	nucleolin - bovine
SUMMARIES	ID	A49725	153671	S10786	843627	865385	164832	PA0041	S13898	G83975	A61220	S11416	S36891	E33178	PC7043	F33084	PC4388	JH0517	A35552	539845	D49164	S06149	S77983	PX0078	S00189	S65392	B44995	A37968	86	802808
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	* Query Match Length	19	20	17	20	10	80	15	16	17	18	20	15	18	21	22	22	16	16	18	20	20	20	21	22	14	18	19	22	19
	Query Match	35.1	26.3	25.4	25.4	24.6	23.7	23.7	23.7	23.7	23.7	23.7	22.8						•	ij.	•	21.9	21.9	21.9	21.5	21.1	21.1	21.1	21.1	20.6
	Score	40			29		27	27	27	27	27	. 27	26	26	26	26	56	25	25	25	25	25	25	0	24.5	24	24	24	24	23.5
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myosin heavy chain	hypothetical prote	shikimate 5-dehydr	ferredoxin b - Jap	ribosomal protein	lectin, galactose/	photosystem I chai	globin - polychaet	ribosomal protein	ribosomal protein	ribosomal protein	fucosyltransferase	fucosyltransferase	apolipoprotein E -	cytochrome-c oxida	beta-conglycinin a
. A49018	C37765	140062	869166	JP0070	A31516	806150	819618	S78416	JP0071	C64330	S78007	848196	A05310	843625	S16335
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14	15	18	19	20	20	20	20	21	22	22	22	22	20	10	12
20.2	20.5	20.5	20.2	20.2	20.2	20.5	20.2	20.2	20.2	20.2	20.2	20.2	19.7	19.3	19.3
23	23	23	23	23	23	23	23	23	23	23	23	23	22.5	22	22
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ALIGNMENTS

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ion f	Gaps
03-Ju longat	0
RESULT 1 A49725 Valint-ErnA ligase (EC 6.1.1.9) - rabbit (fragment) Valint-ErnA ligase (EC 6.1.1.9) - rabbit (fragment) Valinternate names: valy1-tRNA synthetase C;Species: Oryctolagus cuniculus (domestic rabbit) C;Dates: 03-May-1994 #sequence_revision 03-May-1994 #text_change 03-Jun-2002 C;Accession: A49725 R;Bec, G.; Kerjan, P.; Waller, J.P. J. Biol. Chem. 269, 2086-2092, 1994 A;Title: Reconstitution in Vitro of the valy1-tRNA synthetase-elongation factor (EF) Lta subunit in complex formation. A;Reference number: A49725; MUID:94124563; PMID:8294461 A;Accession: A49725 A;Status: preliminary A;Molecule type: protein A;Molecule type: protein A;Molecule type: protein A;Residues: 1-19 <bec> C;Keywords: aminoacy1-tRNA synthetase; ligase; protein biosynthesis</bec>	35.1%; Score 40; DB.2; Length 19; 50.0%; Pred. No. 30; ive 4; Mismatches 3; Indels EQ 22
(t))4 #te // 8yn // 29446	3; Le
ragmen rabbit ay-199 yl-tRN PMID:8	DB 2 30; ches
RESULT 1 A49725 Valine-tRNA ligase (EC 6.1.1.9) - rabbit (fragment) Valine-tRNA ligase (EC 6.1.1.9) - rabbit (fragment) N;Alternate names: valy1-tRNA synthetase C;Species: Oryctolagus cuniculus (domestic rabbit) C;Date: 03-May-1994 #sequence_revision 03-May-1994 #tex C;Accession: A49725 R;Bec, G; Kerjan, P.; Waller, J.P. J. Biol. Chem. 269, 2086-2092, 1994 A;Title: Reconstitution in Vitro of the valy1-tRNA synt Lta subunit in complex formation. A;Reference number: A49725 A;Accession: A49725 A;Accession: A49725 A;Cecssion: A49725 C;Keywords: protein A;Residues: 1-19 eBEC> C;Keywords: aminoacy1-tRNA synthetase; ligase; protein	Score 40; DB. Pred. No. 30; 4; Mismatches
rab mthet (dom visio 7.P. 1994 of t 1.	SCO Pre-
RESULT 1 A49725 Valine-tRNA ligase (EC 6.1.1.9) - rabbit N;Alternate names: valy1-tRNA synthetase C;Species: Oryctolagus cuniculus (domest. C;Date: 03-May-1994 #sequence_revision 01 C;Accession: A49725 R;Bec, G; Kerjan, P.; Waller, J.P. J. Biol. Chem. 269, 2086-2092, 1994 A;Title: Reconstitution in Vitro of the valunit in complex formation. A;Reference number: A49725; MUID:9412456; A;Accession: A49725 A;Accession: A49725 A;Accession: A49725 A;Accession: A69725 C;Keywords: aminoacy1-tRNA synthetase; 1:	Query Match Best Local Similarity 50.0%; Matches 7; Conservative 4 9 KIPEEEKREKLEQ 22 :: : : 2 QLPXEAKKNEKLEK 15
EC 6.1 all 1-t all 1-t all 2-t all 2-t	35. imilarity 50. ; Conservative KIPEEEKREEKLEQ ::
gase (crolage: v -1994 449725 7jan, E 569, setituti 1 compl 1 compl mmber: 44725 44725 iminace: pro	Similarity 50.77 Conservative KIPEERREEKLEQ ::
RNA liadate na aten na aten na aten na as or na on a may	Match ocal S s 7
RESULT 1 A49725 Valine-LRNA ligase (EC 6 N.Alternate names: valyl- C.Species: Oryctolagus cr C.Date: 03-May-1994 #seq C.Accession: A49725 R.Bec, G.; Kerjan, P.; W J. Biol. Chem. 269, 2086 A;Title: Reconstitution. At aubunit in complex f, A;Reference number: A4972 A;Accession: A49725 A;Accession: A49725 C;Keywords: preliminary A;Molecule type: protein A;Residues: 1-19 C;Keywords: aminoacyl-tR	Query Match Best Local Matches
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Description the avy subunit - human (fragment)

C.Species: Homo sapiens (man)

C.Species: Homo sapiens (man)

C.Species: Homo sapiens (man)

C.Species: Homo sapiens (man)

C.Species: Or-Jul-1996 #sequence_revision 02-Jul-1996 #text_change 09-Jul-2004

C.Species: Or-Jul-1996 #sequence_revision 02-Jul-1996 #text_change 09-Jul-2004

C.Species: Or-Jul-1996 #sequence_revision 02-Jul-1996 #text_change 09-Jul-2004

R.Figlewicz, D.A.; Rouleau, G.A.; Krizus, A.; Julien, J.P.

A.Reference number: IS3671; MUID:94040777; PMID:8224877

A.Reference number: IS3671; MUID:94040777; PMID:8224877

A.Reference number: IS3671

A.Residus: preliminary; translated from GB/EMBL/DDBJ

A.Residus: preliminary; translated from GB/EMBL/DDBJ

A.Residus: Dreliminary; Translated from GB/EMBL/DDBJ

RESULT 2

A,Gene: GDB:NEFH A,Cross-references: GDB:120225; OMIM:162230 A,Map position: 22q12.1-22q13.1

ó Gaps .; 0 Length 20; 5; Indels Score 30; DB 2; 1 Pred. No. 7.1e+02; 1; Mismatches 5; Query Match
Best Local Similarity 53.8%;
Matches 7; Conservative

9 KIPEEEKREEKLE 21

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Ca2+-transporting ATPase (EC 3.6.3.8) - rat (fragment)
Cispecies: Rattus norvegicus (Norway rat)
Cispecies: Rattus norvegicus (Norway rat)
Cipate: O2-Aug-1996 #sequence_revision 02-Aug-1996 #text_change 09-Jul-2004
CiAccession: I64832
R;Wu, K.
Mm J. Physiol. 264, 333-341, 1993
A;Title: Molecular cloning and quantification of mRNA and protein encoding Ca2+-ATPase is A;Reference number: I51892
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C;Species: Arabidopsis thaliana (mouse-ear cress)
C;Date: 30-Jun-1992 #sequence_revision 06-Jan-1995 #text_change 09-Jul-2004
C;Accession: PA0041
R;Kamo, M.; Kawakami, T.; Miyatake, N.; Tsugita, A.
R;Kamo, M.; Kawakami, T.; Miyatake, N.; Tsugita, A.
R;Kamo, Sporation and characterization of Arabidopsis proteins by two-dimensiona: A;Reference number: PA0001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            alkaline phosphatase (BC 3.1.3.1) - rabbit
C;Species: Oryclolagus cuniculus (domestic rabbit)
C;Species: Oryclolagus cuniculus (domestic rabbit)
C;Date: 19-Mar-1997 #sequence_revision 19-Mar-1997 #text_change 09-Jul-2004
C;Accession: 813898
R;Fujimorl-Arai, X.; Koyama, I.; Hirano, K.; Sakagishi, Y.; Komoda, T.
R;Fujimorl-Arai, X.; Royama, I.; Hirano, K.; Sakagishi, Y.; Komoda, T.
A;Tille: Purification and partial characterization of intestinal-like alkaline phosphatan
A;Reference number: $13898; MUID:91112827; PMID:1989515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Cross-references: UNIPROT:Q63139; GB:M99223; NID:g203644; PIDN:AAA40992.1; PID:g203646
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        plastoquinol-plastocyanin reductase (EC 1.10.99.1) - Arabidopsis thaliana (fragment)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
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A,Residues: 1-15 <KAM>
A,Cross-references: UNIPROT:Q9ZR03; UNIPROT:Q94E14; UNIPROT:Q9FYB6
A,Experimental source: leaf
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 27; DB 2; Length 8; Pred. No. 2.8e+05; 3; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 23.7%; Score 27; DB 2; I. Best Local Similarity 50.0%; Pred. No. 1.4e+03; Matches 4; Conservative 3; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-8 <RES>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity 57.1%;
4; Conservative 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    C; Keywords: oxidoreductase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9 KIPEEEKR 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ::|: |||
RVPDMEKR 15
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A, Status: preliminary
A, Molecule type: protein
                               9 KIPEEEK 15
                                                                                  4 KVPEKQK 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   11 PEEEKRE 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
Matches 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PEDERRK 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A,Gene: SERCA1b
C,Keywords: hydrolase
                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Accession: 164832
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Accession: PA0041
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C;Species: Rattus norvegicus (Norway rat)
C;Date: 12-Reb-1998 #sequence_revision 20-Reb-1998 #text_change 07-May-1999
C;Accession: S65385
R;Schaegger, H.; Moack, H.; Halangk, W.; Brandt, U.; von Jagow, G.
Bur J. Blochem. 230, 235-241, 1995
A;Title: Cytochrome-c oxidase in developing rat heart. Enzymic properties and amino-term A;Reference number: S65372; MUID:95324529; PMID:7601105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cytochrome-c oxidase (EC 1.9.3.1) chain Vb-H - trout (fragment)

C;Species: Salmo sp. (trout)

C;Date: 19-Mar-1997 #sequence_revision 01-Aug-1997 #text_change 02-Jul-1998

C;Accession: 843627

R;Freund, R; Kadenbach, B.

Bir. J. Biochem. 221, 1111-1116, 1994

A;Title: Identification of tissue-specific isoforms for subunits Vb and VIIa of cytochrc A;Reference number: 843624, MUID:94237150, PMID:8181469
                                                                                                                                                   enamelin, 26K - bovine (fragment)
C;Species: Bos primigenius taurus (cattle)
C;Species: Bos primigenius taurus (cattle)
C;Date: 19-Mar-1997 #sequence_revision 21-Nov-1998 #text_change 09-Jul-2004
C;Accession: 810786
R;Strawich, E.; Glimcher, M.J.
Eur. J. Biochem. 191, 47-56, 1990
A;Title: Tooth 'enamelins' identified mainly as serum proteins. Major 'enamelin' is albutanter: 810786
A;Accession: $10786
A;Accession: $10786
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A;Molecule type: protein
A;Residues: 1-20 <FRE>
C;Keywords: electron transfer; membrane-associated complex; oxidoreductase; respiratory
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             25.4%; Score 29; DB 2; Length 17; 100.0%; Pred. No. 8.3e+02; Live 0; Mismatches 0; Indels
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40.0%; Pred. No. 9.7e+02;
tive 4; Mismatches 5;
                                                                                                                                                                                                                                                                                                                                                                                                           A,Molecule type: protein
A,Residues: 1-17 «STR»
A,Cross-references: UNIPROT:Q7MZM6
C,Keywords: enamel; phosphoprotein
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4 KGIPTDEEQATGLEE 18
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Best Local Similarity 100.00
Conservative 5; Conservative
Conservative
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A,Molecule type: protein
A,Residues: 1-10 <SCH>
C,Keywords: oxidoreductase
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Best Local Similarity
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Best Local Similarity
Matches 4; Conserva
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R;Wittmann-Liebold, B.; Geissler, A.W.; Lin, A.; Wool, I.G.
J. Supramol. Struct. 12, 425-433, 1979
A;Title: Sequence of the amino-terminal region of rat liver ribosomal proteins S4, S6, S6
A;Reference number: S11413; MUID:80252792; PMID:398910
A;Rocession: S11416
A;Molecule type: protein
A;Residues: 1-20 <WIT>
A;Note: the protein is designated as ribosomal protein L6
C;Keywords: protein is designated; ribosome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               C;Accession: S36891
R;Ohara, N.; Kimura, M.; Higashi, Y.; Yamada, T.
EsBS Lett. 331, 9-14, 1993
A;Title: Isolation and amino acid sequence of the 30S ribosomal protein S19 from Mycobac. A;Reference number: S36897; MUID:94009653; PMID:8405418
A;Accession: S36891
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C,Accession: E33178
R;Ward, L.D.; Hong, J.; Whitehead, R.H.; Simpson, R.J.
Electrophoresis 11, 883-891, 1990
A;Title: Development of a database of amino acid sequences for human colon carcinoma pro-A;Reference number: A33178; MUID:91176935; PMID:2079031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ubiquitin carboxyl-terminal hydrolase (EC 3.1.-.-) homolog - yeast (Pichia anomala) (fra N;Alternate names: ALX1 protein
C;Species: Pichia anomala, Candida pelliculosa
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78K heat shock protein - human (fragment)
C;Species: Homo sapiens (man)
C;Date: 31-May-1991 #sequence_revision 31-May-1991 #text_change 23-Mar-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C;Species: Mycobacterium bovis
C;Date: 13-Jan-1995 #sequence_revision 13-Jan-1995 #text_change 09-Jul-2004
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Pred. No. 2.2e+03;
3; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                  4; Indels
                                                                                                                                                                                                                                                 Score 27; DB 2; I Pred. No. 1.8e+03; 5; Mismatches 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          22.8%; Score 26; DB 2; 1
33.3%; Pred. No. 1.9e+03;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ribosomal protein - Mycobacterium bovis (fragment)
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57.1%;
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Best Local Similarity 35.7%;
Matches 5; Conservative
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1 AGEKAEKPDKKEQK 14
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3 KNVPANSRRKAK 14
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Best Local Similarity
4; Conserva
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A;Molecule type: protein
A;Residues: 1-18 <WAR>
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A;Molecule type: protein
A;Residues: 1-15 <OHA>
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Best Local Similarity
Matches 4; Conserv
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C;Date: 01-Dec-2000 #sequence_revision 01-Dec-2000 #text_change 09-Jul-2004
C;Accession: G83975
R;Takami, H.; Nakasone, K.; Takaki, Y.; Maeno, G.; Sasaki, R.; Masui, N.; Fuji, F.; Hira
Nucleic Acids Res. 28, 4317-4331, 2000
A;Title: Complete genome sequence of the alkaliphilic bacterium Bacillus halodurans and
A;Reference number: A83650; MUID:20512582; PMID:11058132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Molecule type: protein
A;Residues: 1-18 <MAT>
A;Cross-tences: UNIPROT:Q7M060
C;Comment: This serine proteinase from a T cell hybridoma does not reduce levels of CD23
C;Keywords: hydrolase; serine proteinase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Cross-references: UNIPROT:Q9K9N8; GB:AP001516; GB:BA000004; NID:g10175192; PIDN:BAB063
A;Experimental source: strain C-125
C;Genetics:
A;Gene: BH2607
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Cispecies: Mus musculus (house mouse)
Cispecies: 03-May-1994 #sequence_revision 03-May-1994 #text_change 09-Jul-2004
CiAccession: A61220
Rimatsubhita, S.; Katz, D.H.
Cill: Immunol. 137, 252-259, 1991
A;Title: The murine epsilon receptor modulating protein: a novel serine protease which a;Reference number: A61220; MUID:91356570; PMID:1679381
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riboscomal protein L6, cytosolic [validated] - rat (fragment)
C;Species: Rattus norvegicus (Norway rat)
C;Date: 31-Dec-1990 #sequence_revision 31-Dec-1990 #text_change 21-Jul-2000
C;Accession: S11416
                                                                                                                                                                                                                                                                                                                                                                              hypothetical protein BH2607 [imported] - Bacillus halodurans (strain C-125)
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                                                                                                        Query Match 23.7%; Score 27; DB 2; Length 16; Best Local Similarity 83.3%; Pred. No. 1.5e+03; Matches 5; Conservative 1; Mismatches 0; Indels
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Pred. No. 1.6e+03;
6; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 27; DB 2; Length 17;
Pred. No. 1.5e+03;
2; Mismatches 5; Indels
          A;Residues: 1-16 <FUJ>
A;Cross-references: UNIPROT:Q7M2K8
C;Keywords: phosphoric monoester hydrolase
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50.0%;
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Best Local Similarity 50.0
Matches 7; Conservative
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Best Local Similarity
Matches 4; Conserva
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2 IPEEEE 7
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A,Molecule type: DNA
A,Residues: 1-17 <STO>
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C;Date: 04-Mar-2000 #sequence_revision 04-Mar-2000 #text_change 09-Jul-2004
C;Accession: PC7043
E;Aska0, 8.; Minagawa, N.; Yoshimoto, A.
Biosci. Biotechnol. Biochem. 63, 1889-1894, 1999
A;Title: Structure and regulatory expression of a single copy alternative oxidase gene A;Reference number: JC7145; MUD:20101471; PMID:1063554
A;Accession: PC7045; MUD:20101471; PMID:1063554
A;Accession: PC7048
A;Residues: 1-21 <SAK>
A;Residues: 1-21 <SAK>
A;Cossar references: UNIPROT:Q9P987; DDBJ:AB026726
C;Genetics:
A;Genetics:
A;Gene: alx1
C;Keywords: hydrolase
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F33084
Inbosomal protein L18 - Haloferax mediterranei (fragment)
N;Alternate names: ribosomal protein HL13
C;Species: Haloferax mediterranei
C;Date: 31-Mar-1992 #sequence_revision 31-Mar-1992 #text_change 09-Jul-2004
C;Accession: F33084
R;McDougall, J.
R;McBerence number: A33084
A;Accession: F33084
A;Accession: F33084
A;Molecule type: protein
A;Residues: 1-22 MCD-A;Residues: 1-22 MCD-A;Residues:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               22.8%; Score 26, DB 2; Length 21; 50.0%; Pred. No. 2.6e+03; tive 3; Mismatches 2; Indels
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GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
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April 6, 2005, 14:40:45; Search time 174 Seconds (without alignments).
64.746 Million cell updates/sec OM protein - protein search, using sw model Run on:

US-09-647-544-7 Title: Perfect score:

114 1 KLGFFAHKKIPEEEKREEKLEQ 22 Sequence:

Scoring table:

BLOSUM62 Gapop 10.0 , Gapext 0.5

13872 Total number of hits satisfying chosen parameters:

1612378 segs, 512079187 residues

Searched:

Minimum DB seq length: 0 Maximum DB seq length: 22

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database :

UniProt_03:*
1: uniprot_sprot:*
2: uniprot_trembl:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

		sapien	us gall	us gall	brassica ol	homo sapien	pseudomonas	sp. ins	taurus	oncorhynchu	benincasa h	homo sapien	streptococc	rattus norv	oryctolagus	homo sapien	oryctolagus	bacillus ha	bos taurus	mus musculu	homo sapien	drosophila	crotalus at	mus musculu		s cabal	sapien	s timid	s grana	s europ	s castr
Description	OBnes0 homo				Q39380 bras		pse	ana	pog	-	P83961 beni					-	_		_	_	_		_	Q9jju5 mus	P83137 malva	P16392 equus	Q9ubk0 homo	Q861s5 lepus		٠.	Q861s8 lepus
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% Query Match	28.9	28.1	27.2	27.2		26.3	26.3	25.9	25.4	25.4	24.6	24.6	24.1	23.7	23.7		23.7	23.7	23.7	23.7	23.7	23.7	23.2		'n	ς.	22.8	ς.	22.8		22.8
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	Q866a0 lepus corsi Q9r545 mycobacteri Q8hy61 sus ecrofa	P50561 halobacteri Q7rq92 plasmodium Q7s002 neurospora	092766 canine dist P56870 rhodococcus P83142 malva parvi P24854 sus scrofa
Q861S9 Q865Z8 Q865Z9	Q866A0 Q9R545 Q8HY61 Q7DH14	RL18 HALME Q7RQ92 Q7S002	092766 MCAZ RHOOP AF2S MALPA IBP4_PIG
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ALIGNMENTS

RESULT 1

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	AA.			update)	on_update)				Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;	Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.					Submitted (JUN-2002) to the EMBL/GenBank/DDBJ databases.				63A3A417E0B53F97 CRC64;	Score 33; DB 2; Length 20;	5e+03;	s 2; Indels	
	20 AA.			Ce	atio				Š	į;					Ź				385	百	-	;he	
	PRT;		Created)	Last seque	Last annot	gment).			a; Craniata	s; Catarrhin				Y.;	EMBL/GenBar	•					Pred. No.	5; Mismatches	
	PRELIMINARY;		MBLrel. 22,	MBLrel. 22,	MBLrel. 22,	rotein (Fra	ion;	nan).	oa; Chordat	ia; Primate			4	-J., Shih L	002) to the	AAM97173.1;	-1	20	20 AA; 2323 MW;	28.9%;	Ly 46.2%;	6; Conservative	cc on typhanagana of
	REL		Tre	Tre	TrE	d u	fus	(Hu	taz	her	90		z		N-2		н	20	Ā		ari	one	
330	Q8NES0 P	Q8NESO;	01-OCT-2002 (01-OCT-2002 (01-OCT-2002 (TrEMBLrel. 22, Last annotation update)	MLL/CBL fusion protein (Fragment).	Name=MLL/CBL fusion;	Homo sapiens (Human).	Eukaryota; Me	Mammalia; Eut	NCBI TaxID=9606;	_ [<u>1</u>]	SEQUENCE FROM N.A.	Fu JF., Hsu	Submitted (JU	EMBL; AY125965; AAM97173.1;	NON TER		SEQÜENCE 20	Query Match	Best Local Similarity 46.2%;	Matches 6; C	4
Q8NES0	ΩÏ	AC	μ	덥	DŢ	DE	SN GN	SO	ပ္ပ	ပ္ပ	ŏ	RN	RP	RA	RL	DR	ΕĿ	FT	S	S	Ä	Ma	è

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RESULT 2

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Homo sapiens (Human).

Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

NUBI_TAXID=9606;

[1]

SEQUENCE FROM N.A.

PubMed=14625809;

Leona P.B., Vega M.E., Jervis P., Pestana A., Alonso J.,

"Two new mutations and three novel polymorphisms in the RB1 gene in

Ecuadorian patients."; 01-JUN-2003 (TrEMBLrel. 24, Created)
01-JUN-2003 (TrEMBLrel. 24, Last sequence update)
05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
Retinoblastoma (RB1 protein) (Fragment). 16 AA. PRT; PRELIMINARY; Name=RB1; Q86WG4 Q86WG4;

J. Hum. Genet. 48:639-641(2003). [2] SEQUENCE FROM N.A.

Gaps

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Eukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta, Spermatophyta, Magnoliophyta, eucotyledons, core eudicots, rosids, eurosids II, Brassicales, Brassicaceae, Brassica.
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SEQUENCE FROM N.A.
SEQUENCE FROM N.A.
HEDLINE=89210285; PubMed=2707122;
Lagrutta A.A., McCarbhy J.G., Scherzinger C.A., Heywood S.M.;
Lidentification and developmental expression of a novel embryonic myosin heavy-chain gene in chicken.";
DNA 8:39-50(1989).
EMBL; M24691; AAA48950.1; -.
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Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.
NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                 Score 31; DB 2; Length 19;
Pred. No. 2.8e+03;
0; Mismatches 3; Indels
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Pred. No. 2.6e+03;
2; Mismatches 1; Indels
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                                                                                                                                                                                                                                                    SEQUENCE 19 AA; 2387 MW; 2DD5C6816CD4D6EC CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE 13 AA; 1413 MW; D1D4EA3926B42772 CRC64;
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01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
IFA binding protein (spl0) (Fragment)
Brassica oleracea (Cauliflower)
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Last annotation update)
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STRAIN-Dok; TISSUE-Curd surface;
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EMBL; S66488; AAB28609.1; -.
PIR; IS3671; IS3671.
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5; Conservative
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70.0%;
                                                                                                                                                                                                                                                                                                                                                               7; Conservative
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                         05-JUL-2004 (TrEMBLrel. 27, Created)
05-JUL-2004 (TrEMBLrel. 27, Last sequence update)
05-JUL-2004 (TrEMBLrel. 27, Last sequence update)
Myosin heavy chain (Fragment).
Gallus gallus (Chicken).
Eukaryoca; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MHC (19 AA) (Fragment).

Gallins gallus (Chicken).

Eukaryota, Metazoa, Chodata, Craniata, Vertebrata, Euteleostomi;
Arcbosauria, Aves; Neognathae, Galliformes, Phasianidae, Phasianinae,
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Pred. No. 1.7e+03;
4; Mismatches 5; Indels
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llarity 70.0%; Pred. No. 2.8e+03;
Conservative 0; Mismatches 3; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          McCarthy J.G.;
Submitted (FEB-1989) to the EMBL/GenBank/DDBJ databases.
EMBL; X06251; CAA29593.1; -.
PIR; S39082; S39082.
                                                                                                                                                                                                                                                                                 16 AA; 1871 MW; 3A6A9791FD68E1E9 CRC64;
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Last annotation update)
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Nucleic Acids Res. 15:8069-8085(1987)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Created)
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     MEDLINE=92319557; PubMed=1352398;
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1 KHLPGESKFQQKLAE 15
                                                                                                                                                                                                                                                                                                                                                                                                                                           8 KKIPEEEKREEKLEO 22
                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity 40.0 Matches 6, Conservative
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Matches 7; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
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NCBI_TaxID=9031;
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NON TER
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Q789B3,
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Q91983,
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RESULT 3

8 셤 RESULT 4
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1D 07899
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Gaps

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01-0CT-1994 (Rel. 30, Created)
01-0CT-1994 (Rel. 30, Last sequence update)
01-0CT-2004 (Rel. 44, Last annotation update)
Cytochrome oxidase polypeptide Vb-heart (EC 1.9.3.1) (Fragment).
Oncorhynchus mykiss (Rainbow trout) (Salmo gairdneri).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi; Actinopterygii; Neopterygii; Teleostei; Euteleostei;
Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
                                                                                                                                                                                                         Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovidae;
Bovinae; Bos
                                                                                                                                                                                                                                                                                                                               Strawich E., Glimcher M.J.; "Tooth 'enamelins' identified mainly as serum proteins. Major
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protein sequencing; Inner membrane; Mitochondrion;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                            NON_TER 17 17 17 SEQUENCE 17 AA; 2137 MW; FFA54E4CEE066720 CRC64;
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                                                                                                                               01-MAR-2004 (TrEMBLrel. 26, Created)
01-MAR-2004 (TrEMBLrel. 26, Last sequence update)
01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
Enamelin, 26K (Fragment).
Bos taurus (Bovine).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 29; DB 2; Le
Pred. No. 4.7e+03;
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100.0%; Pred. No....
0; Mismatches
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                                                                                                                                                                                                                                                                                                                 MEDLINE=90336641; PubMed=2379503;
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                                                                                                                                                                                                                                                                                                                                                             'enamelin' is albumin.";
Eur. J. Biochem. 191:47-56(1990)
PIR, S10786; S10786.
1
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Best Local Similarity 100.0.
Best S; Conservative
Freund R., Kadenbach B.;
                                                                                                    PRELIMINARY;
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P80329;
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COXF_ONCMY
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Shimasaki S., Gao L., Shimonaka M., Ling N.;
"Isolation and molecular cloning of insulin-like growth factor-binding
                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE=91358327; PubMed=1885526; Altenschmidt U., Oswald B., Fuchs G.; Altenschmidt U., Oswald B., Fuchs G.; Putification and characterization of benzoate-coenzyme A ligase and 2-aminobenzoate-coenzyme A ligases from a denitrifying Pseudomonas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
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01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-UIN-2002 (TrEMBLrel. 21, Last annotation update)
Insulin-like growth factor-binding protein-5, IGFBP-5 (Fragment).
                                                                                                                                                                                                                                                                                                                                         Bacteria; Proteobacteria; Gammaproteobacteria; Pseudomonadales;
Peeudomonadaceae.
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Pred. No. 4.8e+03;
2; Mismatches 4; Indels
                                             Score 30; DB 2; Length 20;
Pred. No. 4.1e+03;
1; Mismatches 5; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           26.3%; Score 30; DB 2; Length 22; 37.5%; Pred. No. 4.5e+03; ive 3; Mismatches 7; Indels
 20 20 20
20 AA; 2198 MW; E9A0975B41FD8082 CRC64;
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20 AA; 2185 MW; F77C34A8FAA94EF9 CRC64;
                                                                                                                                                                                                                                                            (TrEMBLrel. 13, Created)
(TrEMBLrel. 13, Last sequence update)
(TrEMBLrel. 21, Last annotation update)
                                                                                                                                                                                                                                22 AA.
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                                                                                                                                                                                                                                                                                                                 2-amino-benzoate-CoA LIGASE=E2 (Fragment)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              sp.";
J. Bacteriol. 173:5494-5501(1991).
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50.0%;
                                               Query Match 26.3%;
Best Local Similarity 53.8%;
Matches 7; Conservative
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                                                                                                                                              6 KSPEKAKSPEKEE 18
                                                                                                                 9 KIPEEEKREEKLE 21
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                Pseudomonas.
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01-MAY-2000
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Rattus norvegicus (Rat).
Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
NCBI_TaxID=10116;
                                              Gaps
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"Molecular cloning and quantification of mRNA and protein encoding Ca2+-ATPase isoforms in rat muscles.";
mm. J. Physiol. 264:333-341(1993).
EMBL; M99223; AA44092.1; -.
NON TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=93273535; PubMed=8500915;
Gerlach D., Kohler W., Gunther E., Mann K.;
Gerlach and characterization of streptolysin O secreted by
Streptococcus equisimilis (group C).";
Infect. Immun. 61:2727-2731(1993).
SEQUENCE 15 AA; 1716 MW; 7C02547F72FF85BE CRC64;
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Pred. No. 6.7e+03;
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Pred. No. 1.6e+06;
3; Mismatches 0; Indels
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                                              Indels
                                                                                                                                                                                                                                                                                                                                                                               Streptococcus equisimilis.
Bacteria, Firmicutes, Lactobacillales, Streptococcaceae,
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Last annotation update)
                                                                                                                                                                                                                                                                                     01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-MAR-2001 (TrEMBLrel. 16, Last annotation update)
Streptolysin O (Fragment).
Pred. No. 8.4e+03;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     B AA.
                                                                                                                                                                                                                                              15 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4; Mismatches
                                           1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          05-UUL-2004 (TrEMBLrel. 27, Created)
05-UUL-2004 (TrEMBLrel. 27, Last sequenc
05-UUL-2004 (TrEMBLrel. 27, Last annotat
Calcium transporting ATPase (Fragment).
Name-SERCAlb;
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STRAIN-CD; TISSUE-Skeletal muscle;
MEDLINE-93191041; PubMed-8447366;
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Similarity 57.1%;
4; Conservative 3
                    66.78;
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1 APKEMPLESAEKEEK 15
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Matches 7; Conservative
                                           6; Conservative
                                                                                                                                                                                                                                              PRELIMINARY;
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                                                                                       21
                                                                                                                                 8 EEEDEENLE 16
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Best Local Similarity
Matches 4; Conserv
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                    Best Local Similarity
                                                                                       13 EEKRBEKLE
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Q78ED1
                                         Matches
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                                                                                                                                                                                                                                                                                                                                                                                                  Benincasa hispida (Wax gourd).
Bukaryota, Viridiplannae, Streptophyta, Embryophyta, Tracheophyta, Spermatophyta, Magnoliophyta, eudicotyledons, core eudicots, rosids, eurosids I; Cucurbitales, Cucurbitacese, Benincasa.
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"Identification of proteins binding to interferon-inducible transcriptional enhancers in hematopoietic cells.";
J. Blol. Chem. 267:4533-4540(1992).
                Score 29; DB 1; Length 20;
Pred. No. 5.6e+03;
4; Mismatches 5; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
KU antigen 73 kDa protein fraction 31 (Fragment).
Homo sapiens (Human)
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Pred. No. 5.3e+03;
                                                                                                                                                                                                                                                                                                          05-JUL-2004 (Rel. 44, Created)
05-JUL-2004 (Rel. 45, Last sequence update)
05-JUL-2004 (Rel. 45, Last annotation update)
Beta benincasin (Fragment)
                                                                                                                                                                                                                                                                  14 AA.
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                    25.4%;
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                                                                                                                                      4 KGIPTDEEQATGLEE 18
                                                                                                          8 KKIPEEKREEKLEQ 22
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                                         Best Local Similarity 40.0 Matches 6; Conservative
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Best Local Similarity
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LD Q9UCQ
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QGLDS7
AC GGLDS7
AC GGLDS7
AC GGLDS7
AC GGLDS7;
BT 05-JUL-2004 (TrEMBLrel. 27, Created)
DT 05-JUL-2004 (TrEMBLrel. 27, Last sequence update)
DT 05-JUL-2004 (TrEMBLrel. 27, Last sequence update)
DT 05-JUL-2004 (TrEMBLrel. 27, Last sequence update)
DE Ca2+ ATPBRS (Fragment)
DS Oryctolagus cuniculus (Rabbit)
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC NOBI_TAXID=9886;
RP SEQUENCE FROM N.A.
RP SEQUENCE FROM N.A.
RC TISSUE=Past twitch muscle;
RX MEDLINE=88169602; Pubmeda=2965149;
RA MacLennan D.H.;
RA MacLennan D.H.;
RA MacLennan D.H.;
RA MacLennan D.H.;
RY "Structure of the rabbit fast-twitch skeletal muscle Ca2+-ATPase
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This sequence represents a fragment of novel human chondrocyte integrin subunit alpha-10 (ISa10, see AAY32242), corresponding to the C-terminal cytoplasmic domain of the protein. The invention relates to a recombinant or isolated integrin heterodimer comprising the alpha10 subunit in association with subunit beta (especially beta-1). The integrin heterodimer, or the subunit alpha-10, or a fragment of it such as the present sequence, can be used as a marker or target of all types of cells, e.g. of chondrocytes, osteoblasts and fibroblasts. They can also be used: for treating pathological conditions involving ISa10, such as damage to cartilage, trauma, rheumatoid arthritis or osteoarthritis; for
                                                                                                                                                                                                                                                                                                                                         Integrin alpha-10; ISa10; human; trauma; rheumatoid arthritis; osteoarthritis; osteoarthrosis; cancer; atherosclerosis; inflammation; therapy; cartilage; chondrocyte; osteoblast; fibroblast; vaccine; marker.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               New isolated integrin subunit alpha-10, used as a marker or target molecule for cells during development, regeneration and pathological conditions, e.g. arthritis, osteoarthrosis, cancer, atherosclerosis
        Abp94244
Abp94458
Abp94487
Abp94828
Adi32231
Addi8588
Abu69560
Abu66643
Adj2129
Adj2129
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                                                                                                                                                                                                                                                                                                                        Human integrin subunit alpha-10 cytoplasmic domain peptide.
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                  ABP94458
ABP93790
ABP94825
                                                       ADO76553
AAU85588
ABU69560
ABU66463
ADH47375
ADJ21294
AAB99530
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AAY52610
AAW14811
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                                                                                                                                             AAB99524
                                                                                                                                                                                                                                                              AAY32244 standard; peptide; 22 AA
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99SE-00000319.
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                    999869979784544
                                                                                                                                                                                                                                                                                                     (first entry)
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  Lundgren-Akerlund E;
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(ACTI-) ACTIVE
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 AAY32244;
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 AADS9147 Alpha IID
Aa48683 Amino aci
Ada27160 Human int
ADP94377 HLA prote
ADP94377 HLA prote
ADP95230 HLA prote
ADP95230 HLA prote
ADP95230 HLA prote
ADP95230 Human lun
ADP66462 Lung canc
Adf47374 Human lun
Adf21293 Human lun
Adf31293 Human lun
Adf31293 Human lun
Adf31293 Human lun
Adf31596 Protein #
ADP52096 Protein #
ADP5115 HLA prote
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Alpha IIb
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Abp56388 Polyanion
Aab59156 Alpha IIb
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                                                               2005, 14:41:35 ; Search time 174 Seconds (without alignments) 48.901 Million cell updates/sec
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Abp95368 I
Abp94457 I
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         GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
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                                                                                                                                                                         2105692 segs, 386760381 residues
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Maximum Match 100%
Listing first 45 summaries
                                                protein search, using sw model
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1 KLGFFAHKKIPEEEKREEKLEQ 22
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ADA27160
ADI39445
ABP94377
ABP94921
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Gapop 10.0 , Gapext 0.5
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seq length: 22
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Match 1
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Score

Result

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physiological or therapeutic reparation of cartilage, or detecting transplantation of cartilage or chondrocytes during transplantation of cartilage or chondrocytes during transplantation of cartilage or chondrocytes and for in vitro scuting, isolating or purification of chondrocytes and for in vitro scuties of differentiation of chondrocytes; and as a target for anti-adhesive drugs or molecules in tendon, ligament, skeletcal muscle or other tissues where adhesion impairs the function of the tissue (all claimed). Isalo binding during embryonic development, anglogenesis or development of cancer, in pathological conditions such as rheumatoid arthritis, osteoarthrosis or reparation of cartilage (claimed). A vaccine comprising the integrin heterodimer or subunit alpha-10 is also claimed. ISalo polynucleotides, vectors, host cells and methods of producing recombinant ISalo are also
                                                                                                                                                                                                                                                                                                       Gaps
 detecting the formation of cartilage during embryonal development
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                                                                                                                                                                                                                                                                         100.0%; Score 114; DB 3; Length 22; 100.0%; Pred. No. 5.7e-09; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Polyanionic polymer; bloactivity; water solubility.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Polyanionic polymer related peptide #3.
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                                                                                                                                                                                                                                                                                                                                                  1 KLGFFAHKKIPEEEKREEKLEQ 22
                                                                                                                                                                                                                                                                                                                                                                                                                                  ABP56388 standard; peptide; 19 AA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            21-MAR-2001; 2001US-0277705P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                                                                                                                                                                        Best Local Similarity 100.
Matches 22; Conservative
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Waggoner DW;
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                                                                                                                                                                                                                                              Sequence 22 AA;
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The present invention describes a method (M) for producing a monodispersed preparation of a polyanionic polymer (PP) larger than 10 kD. (M) involves inserting into an expression vector (EV) a ligation product formed by ligating together oligonuclectides that encode glutamate/aspartate residues, expressing EV in a host cell, and isolating the protein product (P) of EV, where (P) is PP and at least 80% of PP is approximately of the same molecular weight. Also described: (1) a recombinant fusion protein (I) comprissing a polyanionic polypeptide and another polypeptide at either one end or at both ends of it; (2) a

Producing monodispersed preparation of polyanionic polymer for therapy, by expressing vector comprising ligation product of oligonucleotides encoding glutamate/aspartate residues in host cell and isolating the

Example 1; Fig 2; 74pp; English.

product

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Leukine, where the polyanionic polymer is polygiuganic acid or polyaspartic acid; (3) a vector (III) comprising a cassette which comprises a nucleotide sequence encoding a polyanionic polymer and at least one other nucleotide sequence, where the polyanionic polymer is polygiutamic acid or polyaspartic acid; (4) production of (I); (5) a cell (IV) comprising (III) or a vector that comprises a nucleotide sequence that encodes a polyanionic polymer that is larger than 10 kDs, and (6) a recombinantly-produced polyanionic polymer (V) that is of any molecular weight or is larger than 10 kD, and is conjugated to another protein. (I) is useful for treating a disease or ailment in an individual by administering (I) to the individual. (I) is also useful for delivering an effective amount of a pharmaceutically active agent, a therapeutic protein or a drug to a patient in need of it, or for dispnostic and testing or research purposes. AB2222131 and ABB56374 to ABB56400 represent sequences used in the exemplification of the present
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Heptad repeat; transmembrane domain; cytoplasmic; integrin; inflammation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The present invention relates to a peptide with a series of heptadrepats that mimic a transmembrane domain and a selected cytoplasmic domain attached to the heptad repeats. The invention is useful for evaluating structure and activity of a selected occupied and clustered transmembrane protein with the selected cytoplasmic domain and for identifying therapeutic compounds. It is also useful for identifying a cytoplasmic domain binding partner. It is may be used to study protein interactions with transmembrane proteins such as integrin, which can be used to treat conditions in which over activity of integrins is involved,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Polypeptides useful in construction of structural models for identifying therapeutic compounds, comprises series of heptad repeats that mimic a transmembrane domain and cytoplasmic domain attached to the repeats.
  polyanionic polymer (II) conjugate comprising a polyanionic polymer and
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                  6; Length 19;
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Pred. No. 34;
4; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAB59156 standard; peptide; 20 AA.
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57.1%;
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Matches 8; Conserv
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transmembrane domain; cytoplasmic; integrin; inflammation;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                          Polypeptides useful in construction of structural models for identifying therapeutic compounds, comprises series of heptad repeats that mimic a transmembrane domain and cytoplasmic domain attached to the repeats.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Amino acid sequence of a peptide from the integrin beta-3-subunit.
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                                                                      Alpha IIb beta 3 binding motif peptide #1.
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Best Local Similarity
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                                                                                                                                                                                                  WO200073341-A1
                                                                                                          Heptad repeat;
                                                                                                                                                                                                                                                                                                               27-MAY-1999;
                                                                                                                                                                                                                                                                                                                                                                                     Ginsberg MH,
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                                  21-MAR-2001
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                                                                                                                                                                                                                                      07-DEC-2000
                                                                                                                                                                Synthetic.
AAB59147;
                                                                                                          Heptad
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAR88078 represents the human integrin alpha-IIb cytoplasmic domain. It is used to produce a Tac/integrin chimera having the cytoplasmic domain as above covalently linked to the extracellular and transmembrane domain of the Tac subunit of the human interleukin-2 receptor. Chimeric integrins can be used to block the activity of natural integrins in vivo. This provides an alternative route, to using small molecule inhibitors of ligand binding by integrins, of studying and modulating integrin activity in vivo. These inhibitors act on the interaction between intracellular molecules and integrins and are therefore likely to be cell type-specific
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           New soluble protein models of transmembrane receptors - have helical amphiphilic sequence to represent transmembrane domain, also chimeric integrin proteins for inhibiting human cellular integrins.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Otoole TE;
                                                                                                                                                                                                                                                                                                                                                                                                                         Helical; soluble; amphiphilic; integrin; chimera; inflammation;
inhibition; thrombosis; malignancy; transmembrane receptor.
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                                                                        Length 20;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7; Indels
                                                                                                          7; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Kent SBH,
such as inflammation, thrombosis and malignancy
                                                                        4,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 43; DB 2
Pred. No. 50;
2; Mismatches
                                                                      DB
36;
                                                                                                            Mismatches
                                                                      Score 44;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                     Integrin alpha-IIb cytoplasmic region.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Disclosure; Fig 9; 100pp; English
                                                                                                                                                                                                                                                                          AAR88078 standard; peptide; 20 AA
                                                                                                          2;
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                                                                                                                                              1 KLGFFAHKKIPEEEKREE 18
                                                                                                                                                                                 1 KVGFFKRNRPPLEEAAEE 18
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50.0%;
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50.0%;
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Best Local Similarity 50.0%,
Conservative
See 9, Conservative
                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                     Local Similarity 50.0
nes 9; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 1996-049670/05.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 20 AA;
                                    Sequence 20 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           13-JUN-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               15-JUN-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
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                                                                        Query Match
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AARB8078
AAR

RESULT 5 AAB59147 ID AAB5 XX

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Gaps

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Length 20; Indels Greene JM;

Wei Y,

Moore PA,

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The invention relates to an isolated nucleic molecule that is at least CC 95% identical to 18 human cDNA sequences representing 12 novel genes cented proteins or a polyvucleotide fragment of the cDNA.

CC defined in the specification, its species homologue, a variant or allelic variant of the polynucleotide having a homologue, a variant or allelic variant of the polynucleotide having a polynucleotide capable of hybridising under conditions the polynucleotide, where the polynucleotide does not hybridise under stringent conditions to a nucleic acid molecule combinant vectors, host cells for producing the polynucleotide are recombinant vectors, host cells for producing the polynpetide, the secreted polypeptide fragment, domain, epitope, full-length protein, variant, allelic variant or species homologue, antibodies that specifically bind to the polypeptides, diagnosing treating, preventing or ameliorating amedical condition by administering the polynucleotide or the polypeptide, the gene corresponding to the cDNA sequence and sequence in a cell, isolating the supernatant, and detecting an activity in a biological assay (by expressing the cDNA sequence in a cell, isolating the supernatant, and detecting an activity in a biological condition, for preventing, treating, or a melocation or a susceptibility to a pathological condition, for preventing, treating, or a melocating and antibodies are useful for disorders, neurological and blood clotting disorders (many examples are grown in the specification). The nucleic acids are also useful for certicition mapping. The polypeptides and antibodies are useful for certicition mapping. The polypeptides and antibodies are useful for certicition mapping. The polypeptides and antibodies are useful for certicition mapping. The polypeptides and antibodies are useful for certicition or increase or decrease storage capabilities of fact contriled as encoding integrin alpha 11 subunit. The present sequence is fat content or other unterginal alpha 11 sassay and sequence are separated to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              subunit. The present sequence is the Integrin alpha cytoplasmic domain motif as found in the gene7 protein
                                                                                                                                                                                                                                                                                                                                                 New human secreted nucleic acid molecules and polypeptides, useful for preventing, treating, or ameliorating a medical condition, such as cancer, inflammation, immune disorders, neurological and blood clotting
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            34.2%; Score 39; DB 6; Le
100.0%; Pred. No. 1.8e+06;
tive 0; Mismatches 0;
                                                                                                                                                                                                                             Olsen HS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Example 53; Page 257; 454pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADI39445 standard; peptide; 7 AA.
                                                                                                                                                                                                                             Kenny JJ, Ol
Crocker PR;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7; Conservative
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                                                                          WEI Y. GREENE J M.
KENNY J J.
OLSEN H S.
MOORE P A.
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Best Local Similarity
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                                                                                                                                                                                                                          Young PE, F
M, Liu D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KLGFFAH 7
                                                                                                                           RUBEN S M.
                                                                                                                                                       LIU D.
CROCKER P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     conserved
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            or its homologue.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 7 AA;
                                                                                                                                                                                                                                                    Ruben SM,
                                                                                                                                                                                                                                                                                                                                                                                                                              disorders.
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                                                                                                                           (RUBE/)
(LIUD/)
(CROC/)
     KENN/)
                         (OLSE/)
                                                                                                    GREE/
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Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                 This is the amino acid sequence of a peptide from human integrin beta-3-subunit, which is used in the method of the invention. This method shrotoves the inhibition of cellular adhesion, which the use of peptides comprising a cell adhesion regulatory domain (CARD) of an adhesion receptor abunit expressed by the cell. The method is useful in treatments requiring inhibition of cellular adhesion e.g. to prevent growth of tumours, since adhesion is required to form tumour masses. It can be used to inhibit cellular inflammatory responses, (especially when the CARD is an integrin beta or alpha subunit), and to the peptide comprises an integrin beta i CARD. The method is useful to treat excessive fibroblast proliferation (especially to heal wounds) when the peptide comprises an integrin beta i CARD. The method is useful to treat coronary and/or vascular diseases, as well as respiratory distress syndrome, and retinosis in the blood
                                                                                                                                                                                                                                                                      Inhibiting cellular adhesion useful e.g. to prevent tumour growth - by introducing peptide(s) comprising cell adhesion regulatory domain of an adhesion receptor or counter receptor sub-unit expressed by the cell.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cytostatic; antiinflammatory; immunomodulator; neuroprotective; hemostatic; gene therapy; cancer; inflammation; immune disorder; neurological disorder; blood clotting disorder; food additive; preservative; secreted protein; integrin alpha; human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ;
0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human integrin 10alpha subunit cytoplasmic domain motif.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pred. No. 65;
2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADA27160 standard; peptide; 7 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           13
                                                                                                                                                                                                                                                                                                                                                                          Example; Page 23; 76pp; English
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                         97WO-US018331.
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19-APR-2000; 2000US-0198407P.
30-OCT-2000; 2000US-0243792P.
18-APR-2001; 2001US-00836553.
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                                                                          96US-0028420P
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                                                                                                                                                                         Hawiger JJ, Timmons S,
                                                                                                                           UYVA-) UNIV VANDERBILT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
                                                                                                                                                                                                                          WPI, 1998-251051/22.
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(YOUN/) YOUNG P E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US2003055231-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 19 AA;
                       09-OCT-1997;
                                                                          15-OCT-1996;
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RESULT 7 ADA27160

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Gaps

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Indels Length 7;

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09-APR-2002; 2002WO-US011359.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                     유
                                                                                                                                                                                                                                                                                                               The invention relates to a marker (I) for mammalian mesenchymal stem cells (MSC), comprising an integrin alpha10 and/or integrin alpha11 chain expressed on cell surface of a MSC or intracellular in a MSC. (I) is useful for identification of a mammalian MSC, for modulating differentiation of a mammalian MSC and for isolating a mammalian MSC. (I) is useful for identifying, differentiating and isolating a mammalian MSC from a mixed cell population as useful tools in cell therapy or in repair of damage tissue. The present sequence represents a sequence from the integrin alpha10 cytoplasmic domain which is present in the place of a conserved integrin cytoplasmic domain motif (ADI39444).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                    Marker for mammalian mesenchymal stem cells, useful for identifying and isolating mesenchymal stem cells, comprising integrin alpha 10 and/or integrin alpha 11 chain expressed on surface or within the stem cell.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human; 121P2A3; cytostatic; immunostimulant; vaccine; SSH;
humoral immune response; cellular immune response;
suppression subtractive hybridisation; HLA; human leukocyte antigen.
                                               MSC; mesenchymal stem cell; integrin alpha10; integrin alpha11; cell therapy; tissue repair; cytoplasmic domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                   34.2%; Score 39; DB 8; Length 7;
                             Integrin alphal0 cytoplasmic domain peptide sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred. No. 1.8e+06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%; Prea. ...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HLA protein 121P2A3 peptide #10732
                                                                                                                                                                                                                                                                                              Disclosure; Page 2; 37pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ABP94377 standard; peptide; 15 AA.
                                                                                                                                                            14-JUN-2002; 2002SE-0001831.
                                                                                                                                         12-JUN-2003; 2003WO-SE000983
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
         (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity 100.
Matches 7; Conservative
                                                                                                                                                                                                               Lundgren-Akerlund E;
                                                                                                                                                                                                                                   WPI; 2004-062518/06.
                                                                                                                                                                                          (CART-) CARTELA AB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 KLGFFAH 7
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                                                                                                 WO2003106492-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO200283068-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 7 AA;
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                                                                              Unidentified
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         22-APR-2004
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                                                                                                                     24-DEC-2003
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                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
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The invention relates to a novel composition comprising a substance that modulates the status of a protein, 121P2A3. The composition of the modulates the status of a protein, 121P2A3. The composition of the invention has cytostatic and immunostimmlant activity, and is useful as a vaccine. The 121P2A3 proteins and polynucleotides are useful for cliciting humoral or cellular immuno response. The polynucleotides are useful for characterising cytogenetic abnormalities of this chromosomal couseful for characterising cytogenetic abnormalities of in the chromosomal region that encodes 121P2A3 that may contribute to malignant phenotype, and in assessing the status of 121P2A3 gene products in normal versus cancerous tissues. The proteins are useful for generating and characterising domain-specific antibodies, for identifying agents or cellular factors that bind to 121P2A3 or a particular structure domain, and in various therapeutic and diagnostic contexts, including cancer vaccines. The antibodies or T cells reactive with the product are useful in passive or active immunisation, and in imaging methodologies for the management of cancer. The sequences shown in ABP813646 - ABP95595 represent peptides from the 121P2A3 variants of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                         New composition comprising a substance that modulates the status of 121P2A3 polypeptides, useful for eliciting humoral or cellular immune responses or in assessing the status of 121P2A3 gene products in normal
                                                                                                                                                                                                                                                Mitchell SC;
W, Jakobovits A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
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humoral immune response; cellular immune response;
suppression subtractive hybridisation; HLA; human leukocyte antigen.
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                                                                                                                                                                                                                                                Challita-Eid PM, Raitano AB, Faris M, Hubert RS,
Afar DEH, Saffran D, Morrison K, Morrison RK, Ge
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 13; Page 263; 362pp; English.
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10-APR-2001; 2001US-0282739P.
25-APR-2001; 2001US-0286630P.
22-JUN-2001; 2001US-0300373P.
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25-APR-2001; 2001US-0286630P.
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Best Local Similarity 53.3
Matches 8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            versus cancerous tissues.
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                                                                                                                                                                      (AGEN-) AGENSYS INC
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Mitchell

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The invention relates to a novel composition comprising a substance that modulates the status of a protein, 12192A3. The composition of the invention has cytostatic and immunostimulant activity, and is useful as a vaccine. The 121P2A3 proteins and polynucleotides are useful for eliciting humoral or cellular immune response. The polynucleotides are useful for cuseful for characterising cytogenetic abnormalities of this chromosomal focus, as tools that can be used to delineate cytogenetic abnormalities of in the chromosomal region that encodes 121P2A3 that may contribute to malignant phenotype, and in assessing the status of 121P2A3 gene products in normal versus cancerous tissues. The proteins are useful for generating and characterising domain-specific antibodies, for identifying agents or cellular factors that bind to 121P2A3 or a particular structure domain, and in various therapeutic and diagnostic contexts, including cancer vaccines. The antibodies or T cells reactive with the product are useful in passive or active immunisation, and in imaging methodologies for the management of cancer. The sequences shown in ABB81646 - ABB95595 represent peptides from the 121P2A3 variants of the invention
                                                                                          New composition comprising a substance that modulates the status of 121P2A3 polypeptides, useful for eliciting humoral or cellular immune responses or in assessing the status of 121P2A3 gene products in normal
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Afar DEH, Saffran D, Morrison K, Morrison RK, Ge W, Jakobovits A;
 ano AB, Faris M, Hubert RS, Mitchell SC;
Morrison K, Morrison RK, Ge W, Jakobovits A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 humoral immune response; cellular immune response; suppression subtractive hybridisation; HLA; human leukocyte antigen.
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                                                                                                                                                                                         Claim 13; Page 274; 362pp; English.
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 Raitano AB,
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25-APR-2001; 2001US-0286630P.
22-JUN-2001; 2001US-0300373P.
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1 ARGKLEEEKKRSEEL
                                                                                                                                                    versus cancerous tissues.
                     Afar DEH, Saffran D,
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Best Local Similarity
Challita-Eid PM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 15 AA;
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                                                                                                                                                                    New composition comprising a substance that modulates the status of 121P2A3 polypeptides, useful for eliciting humoral or cellular immune responses or in assessing the status of 121P2A3 gene products in normal
                                                                         id PM, Raitano AB, Faris M, Hubert RS, Mitchell SC; Saffran D, Morrison K, Morrison RK, Ge W, Jakobovits A;
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humoral immune response; cellular immune response;
suppression subtractive hybridisation; HLA; human leukocyte antigen.
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                                                                                                                                                                                                                                                                 Claim 13; Page 254; 362pp; English.
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                                                                           Challita-Eid PM, Raitano AB,
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25-APR-2001; 2001US-0286630P.
22-JUN-2001; 2001US-0300373P.
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22-JUN-2001; 2001US-0300373P
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hes 8; Conservative
                                                                                                                                                                                                                               versus cancerous tissues.
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                                     (AGEN-) AGENSYS INC
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BANGUR
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Clapper JD;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human; lung
                                                                                                                                                                                                                                                                                                                                                                                          ABU69559;
                                              Claim 2;
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(FANG/)
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                                                                                    The invention relates to a novel composition comprising a substance that modulates the status of a protein, 121P2A3. The composition of the invention has eyeoteatic and immunostimulant activity, and is useful as a vaccine. The 121P2A3 proteins and polymucleotides are useful for eliciting humoral or cellular immune response. The polymucleotides are useful for characterising cyrogenetic abnormalities of this chromosomal locus, as tools that can be used to delineate cytogenetic abnormalities in the chromosomal region that encodes 121P2A3 that may contribute to malignant phenotype, and in assessing the status of 121P2A3 gene products in normal versus cancerous tissues. The proteins are useful for generating and characterising domain-specific antibodies, for identifying agent or callular factors that bind to 121P2A3 or a particular structure domain, and in various therapeutic and diagnostic contexts, including cancer vaccines. The antibodies or T cells reactive with the product are useful in passive or active immunisation, and in imaging methodologies.
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          New composition comprising a substance that modulates the status of 121P2A3 polypeptides, useful for eliciting humoral or cellular immune responses or in assessing the status of 121P2A3 gene products in normal
                                                                                                                                                                                                                                                                                                                                             Gaps
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Marnerakis M, Carter D, Fanger GR, Vedvick TS, Bangur CS,
Wang A, Fanger N, Switzer A, Mcneill PD, Clapper JD;
                                                                                                                                                                                                                                                                                                                        Length 15;
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Pred. No. 1.4e+02;
3; Mismatches 4;
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                                                                 Claim 13; Page 280; 362pp; English
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                                                                                                                                                                                                                                                                                                                                           3;
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2000US-00658824.
2000US-00671325.
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53.3%;
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2000US-00736457
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1 ARGKLEEEKKRSEEL 15
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                                             versus cancerous tissues,
                                                                                                                                                                                                                                                                                                                                               Conservative
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13-DEC-2000;
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06-OCT-2000;
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                                                                                                                               The invention describes an isolated polynucleotide and polypeptide useful for stimulating and/or expanding T cells specific for a tumour protein for determining the presence of a cancer in a patient. A composition containing the polynucleotide and/or polypeptide is useful for treating a lung cancer in a patient. The polypeptide is useful for removing tumour cells from a biological sample. The polynucleotide is also useful as probe or primer to detect the level of mRNA encoding a tumour protein. This is the amino acid sequence of a lung tumour associated peptide. This patent did not form part of the printed specification, but was obtained in electronic format directly from MIPO at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Novel lung cancer polynucleotide encoding lung cancer protein, useful for detecting the presence of lung cancer in a patient, and in pharmaceutical compositions, e.g. vaccines, for treating lung cancer.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cancer; lung tumour; cytostatic; vaccine; T cell expansion;
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Novel polynucleotide encoding a lung tumor polypeptide useful for stimulating and/or expanding T cells specific for a tumor protein.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 20;
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Pred. No. 1.8e+02;
3; Mismatches 3; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                       ftp.wipo.int/pub/published pct_sequences
                                                                                 SEQ ID NO 1855; 223pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ABU69559 standard; peptide; 20 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         13-DEC-2000; 2000US-00736457
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Best Local Similarity
7; Conserve
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WANG T.
SWITZER A E
MCNEILL P CLAPPER J I
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the specification, or a sequence (S2) mentioned in specification, or a sequence serior roughly a sequence serior consisting of at least 20 contiguous residues of s1, sequences having 75*, preferably of $15, sequences hat hybridise to $11, sequences having 75*, preferably of $15, sequences hat hybridise to $13, sequences having 75*, preferably of $15, sequences mentioned in the specification, a sequence an isolated an included are an isolated polypeptide (comprising a sequence fiscal and sequence mentioned in the specification, a sequence monded by the polymorlectide, or sequences having at least 70*, preferably 90*, identify to a sequence encoded by the polymorlectide, an expression control sequence, a host cell transformed or transfected with the vector, an isolated antibody (or its antigen-binding fragment) that the vector, an isolated antibody (or its antigen-binding fragment) that the beach of the polymorlectide polypeptide, an expression control sequence, a host cell transformed or transfected with the vector, an isolated antibody (or its antigen-binding fragment) that the objection of the polypeptide and the polymorlectide aspection or antigen or antigen presenting cells, under conditions and for a time aufficient or antigen-presenting cells, under conditions and for a time aufficient or antigen presenting cells that express the polymorlectide, such that 7 cells from a patient with the polymorlectide, protein or antigen presenting cells that express the polymorlectide, such that 7 cells proliferated from a patient with the polymorlectide, such that 7 cells or composition for simulating and imministering to the patient and electric amount of the patient. The polymorlectide, protein and scales and composition for simulating an immune response in a patient, and for the patient. The protein and oligomorlectide is also useful in pharmaceutical compositions, e.g. vaccines. The polymorlectide is a sled protein and protein and electricing and in the design and protein or primer for nucletic sequence. The polymorl
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      library. The present sequence is an epitope mapping peptide derived from the cDNA L548S isolated from a library derived from lung tumour/cancer cells. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly
a sequence selected from any of the 14 sequences mentioned in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    from the USPTO at segdata.uspto.gov/sequence.html?DocId=20020197669
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53.8%; Pred. No. 1.8e+02;
tive 3; Mismatches 3; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Lung cancer therapyand diagnosis associated protein #86.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Lung cancer; cytostatic; vaccine; gene therapy; cancer.
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Best Local Similarity 53.8
Matches 7; Conservative
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The invention describes an isolated polynucleotide comprising one of 32 sequences, complement or degenerate variants of them. The polynucleotide is useful for preparing a composition e.g. a vaccine or for gene therapy, for treating or inhibiting development of cancer, e.g. lung cancer. This sequence represents a polypeptide associated with the compositions and methods for the therapy and diagnosis of lung cancer
                                                                                                                                                                                                                                                                                                                     New polynuclectide, useful for preparing a composition for treating or inhibiting development of cancer, e.g. lung cancer.
                                                                                                                                                                                                                                                               Mcnabb A;
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                                                                                                                                                                                                                                                  Y, Johnson JC, Retter MW;
Vedvick TS, Bangur CS, M
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            completed: April 6, 2005, 14:58:46
ne : 176 secs
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                                                                                                                                                                                                                                                  A, Wang T, Watanabe
Carter D, Fanger GR,
                                                  2000US-00546259.
2000US-00560406.
2000US-00589184.
2000US-00614124.
2000US-00651563.
                                                                                                                                     2000US-00671325.
2000US-00677419.
2000US-00702705.
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ARKKVEEEDBEEE 20
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Matches 7; Conserv
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                                                                 27-APR-2000;
05-JUN-2000;
11-JUL-2000;
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                                                                                                          29-AUG-2000;
08-SEP-2000;
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                                                     10-APR-2000;
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GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
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OM protein - protein search, using sw model	April 6, 2005, 14:58:57 ; Search time 138 Seconds (without alignments) 52.927 Million cell updates/sec
protein	April
OM protein -	Run on:

22 1 KLGFFAHKKI PEEEKREEKLEQ US-09-647-544-7 Perfect score: Sequence:

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

1418010 segs, 331997259 residues Searched:

306921 Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 22

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database

Published Applications AA:*

1: /cgn2_6/ptodata/1/pubpaa/USO7_PUBCOMB.pep:*
2: /cgn2_6/ptodata/1/pubpaa/PCT_NEW_PUB.pep:*
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15: /cgn2_6/ptodata/1/pubpaa/USO0_PUBCOMB.pep:*
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19: /cgn2_6/ptodata/1/pubpaa/USO0_PUBCOMB.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

											_	_	_	
	Description	Seguence 67, Appl	Sequence 24, Appl	Sequence 24, Appl	Sequence 15, Appl	Sequence 15, Appl		Sequence 1855, Ap		Seguence 1855, Ap		Sequence 1855, Ap	Sequence 1855, Ap	Sequence 36284, A
f	Tip	US-10-101-487-67	US-09-320-907B-24	US-10-447-292-24	US-09-320-907B-15	US-10-447-292-15	US-10-786-505-26	US-09-736-457-1855	US-09-902-941-1855	US-09-849-626-1855	US-10-017-754-1855	US-10-113-872-1855	US-10-283-017-1855	US-09-864-761-36284.
6	<u> </u>	13	0	15	σ	15	16	σ	σ	σ	14	14	15	σ
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Query	March	38.6	38.6	38.6	37.7	37.7	36.8	34.2	34.2	34.2	34.2	34.2	34.2	33.3
9	Score	44	44	44	43	43	42	39	39	39	39	39	39	38
Result	NO.	н	~	m	4	S	9	7	œ	თ	10	11	12	13

Sequence 1856, Ap Sequence 1856, Ap	- 10	Sequence 1856, Ap	185	210	'n,	17	Sequence 15, Appl	-	19	9	Sequence 16, Appl	7,	118	П	10	20,	ਜ	4	Ļ	'n	- -	N	Н	ď	7	'n	Ñ	25, 7	Sequence 25, Appl
9 US-09-736-457-1856 9 US-09-902-941-1856	US-10-017-754-	14 US-10-113-872-1856	5 US-10-283-017-1	0 US-09-8	0	US-09-32	0	S		10 US-09-733-179A-4	15 US-10-447-292-16	15 US-10-350-405-7	15 US-10-324-143-118	15 US-10-005-305-19	17 US-10-950-010-101	15 US-10-005-305-20	17 US-10-950-010-100	14 US-10-059-720-4		9 US-09-880-132-1	m	14 US-10-177-550-21	4	4 US-10-057-78	4 US-10-212-628-	4 US-10-177-55	4 US-10-177-550-2	9 US-09-320-907B-25	15 US-10-447-292-25
200	2 2	20	50	13	13	14	14	14	16	16	16	19	19	21	21	22	22	19	20	20	20	20	20	21	21	21	21	15	15
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114	17	18	19	20	21	22	23	24	. 25	56	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45

ALIGNMENTS

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APPLICANT: LEUNG, DAVID W.
APPLICANT: LEUNG, DAVID W.
APPLICANT: LEUNG, DAVID W.
APPLICANT: LEONGUIST, ALAN
APPLICANT: LOFQUIST, ALAN
APPLICANT: PIETZ, GREGORY E.
APPLICANT: TOMPKINS, CHRISTOPHER K.
APPLICANT: WAGGONER UR., DAVID W.
TITLE OF INVENTION: TRERENCE
FILE REFERENCE: 077319/0329
CURRENT APPLICATION NUMBER: US/10/101,487
CURRENT FILING DATE: 2002-03-20
PRIOR PILING DATE: 2001-03-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; OTHER INFORMATION: Description of Artificial Sequence: Synthetic peptide US-10-101-487-67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
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Sequence 67, Application US/10101487; Publication No. US20020169125A1; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQ ID NOS: 116
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 67
LENGTH: 19
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US-10-786-505-26
Sequence 26, Application US/10786505
Publication No. US20050003388A1
GBUBLICALIST GROSS, RICHARD W.
APPLICANT: GROSS, A MANCUSO
TITLE OF INVENTION: CALCIUM INDEPENDENT PHOSPHOLIPASE A2Y POLYNUCLECTIDES
TITLE OF INVENTION: AND POLYPEPTIDES AND METHODS THEREFOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 15, Application US/10447292

Publication No. US20030224453A1

GENERAL INPORMATION:

APPLICANT: PRAFF, MARTIN

TITLE OF INVENTION: TRANSMEMBRANE RECEPTORS

FILE REFERENCE: SRI-0006

CURRENT APPLICATION UNMBER: US/10/447,292

CURRENT FILING DATE: 1999-05-27

PRIOR PILING DATE: 1999-05-27

PRIOR FILING DATE: 1999-11-05

NUMBER OF SEQ ID NOS: 25

SOFTWARE: PATENTI VET.
                                              APPLICANT: PFAFF, MARTIN
TITLE OF INVENTION: STRUCTURAL MODELS FOR CYTOPLASMIC DOMAINS OF
TITLE OF INVENTION: TRANSMEMBRANE RECEPTORS
FILE OF INVENTION: TRANSMEMBRANE RECEPTORS
FILE REPERNCE: SRI-006
CURRENT APPLICATION NUMBER: US/09/320,907B
CURRENT APPLICATION NUMBER: US/09/320,907B
PRIOR APPLICATION NUMBER: US/09/320,907B
PRIOR PILING DATE: 1999-11-05
NUMBER OF SEQ ID NOS: 25
SOFTWARE: PALENTIN VEY: 2.0
SEQ ID NO 15
LENGTH: 20
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; OTHER INFORMATION: Description of Artificial Sequence:Synthetic
US-09-320-907B-15
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US-10-447-292-15
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 37.7%; Score 43; DB 9; Length 20; Best Local Similarity 50.0%; Pred. No. 57; Matches 9; Conservative 2; Mismatches 7; Indels
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ORGANISM: Artificial Sequence
                        APPLICANT: GINSBERG, MARK H.
GENERAL INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-447-292-15
                                                                                                                                                                                                                                                                                                                                                                   TYPE: PRT
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                                                   Sequence 24, Application US/09320907B
Publication No. US20020198360A1
GENERAL INFORMATION:
APPLICANT: GINSBERG, MARK H.
APPLICANT: GINSBERG, MARK H.
TITLE OF INVENTION: TRANSMEMBRANE RECEPTORS
FILE OF INVENTION: TRANSMEMBRANE RECEPTORS
FILE REPERENCE: SRI-0006
CURRENT RELIGION NUMBER: US/09/320,907B
CURRENT PILING DATE: 1999-05-27
PRIOR APPLICATION NUMBER: 09/187,236
PRIOR FILING DATE: 1998-11-05
NUMBER: OF SEQ ID NOS: 25
SOFTWARE: PATENTIN Ver. 2.0
SEQ ID NO 24
CHARTH PATENTING DATE: 1000-11-05
SEQ ID NO 24
CHARTH PATENTING DATE: 1000-11-05
SEQ ID NO 24
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TITLE OF INVENTION: STRUCTURAL MODELS FOR CYTOPLASMIC DOMAINS OF
TITLE OF INVENTION: TRANSMEMBRANE RECEPTORS
FILE REPERENCE: STR.0006
CURRENT APPLICATION NUMBER: US/10/447,292
CURRENT PRILING DATE: 2003-05-27
PRIOR APPLICATION NUMBER: US/09/320,907B
PRIOR PILING DATE: 1999-05-27
PRIOR APPLICATION NUMBER: 09/187,236
PRIOR PLILING DATE: 1999-11-05
NUMBER OF SEQ ID NOS: 25
SOFTWARE: PATENTIN Ver: 2.0
SEQ ID NO 24
LENTH: 20
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US-10-447-292-24
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 38.6%; Score 44; DB 9; Length 20; Best Local Similarity 50.0%; Pred. No. 42; Matches 9; Conservative 2; Mismatches 7; Indels
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US-09-300-907B-15
i Sequence 15, Application US/09320907B
i Publication No. US20020198360A1
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// Publication No. US20030224453A1
// GENERAL INFORMATION:
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ORGANISM: Artificial Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity 50.0v
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; Sequence 1855, Application US/09849626
; Publication No. US20020197669A1
; GENERAL INFORMATION:
    APPLICANT: Bangur, Chaitanya
    APPLICANT: Wang, Aijun
    APPLICANT: Wang, Tongtong
    APPLICANT: Wang, Tongtong
    APPLICANT: Moreil, Patricia
    APPLICANT: Clapper, Jonathan
    ITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY AND
    TITLE OF INVENTION: DIAGNOSIS OF LUNG CANCER
    FILE OF INVENTION: DIAGNOSIS OF LUNG CANCER
    FILE OF INVENTION: DIAGNOSIS OF LUNG CANCER
    FILE SPERENCE: 210121.478616
    CURRENT APPLICATION NUMBER: US/09/849,626
    CURRENT FILING DATE: 2001-05-03
    NUMBER OF SEQ ID NOS: 1926
    SOFTWARE: FastSEQ for Windows Version 3.0
    LENGTH. 1855
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                                                                    APPLICANT: Bangur, Chaitanya S.
APPLICANT: McNabb, Andria
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY
TITLE OF INVENTION: CAMPOSITIONS OF LUNG CANCER
FILE REFERENCE: 210121.478C17
CURRENT APPLICATION NUMBER: US/09/902,941
CURRENT FILING DATE: 2001-07-10
NUMBER OF SEQ ID NOS: 2002
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 1855
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Pred. No. 2e+02;
3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                    34.2%; Score 39; DB 9; 53.8%; Pred. No. 2e+02;
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Publication No. US20030054363A1
GENERAL INFORMATION:
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Carter, Darrick
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Watanabe, Yoshihiro
Johnson, Jeffrey C.
Retter, Marc W.
                                                    Vedvick, Thomas S.
Bangur, Chaitanya S.
McNabb, Andria
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53.8%;
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Best Local Similarity 53.00
Local 7; Conservative
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Best Local Similarity 53.6-
Best Local 7; Conservative
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ARKKVEEEDEEEE 20
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8 ARKKVEEEDEEEE 20
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; ORGANISM: Homo sapiens
US-09-902-941-1855
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US-09-849-626-1855
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APPLICANT: Fanger, Gary
APPLICANT: Vedvick, Tom
APPLICANT: Carter, Darrick
APPLICANT: Reter, Marc
APPLICANT: Reter, Marc
APPLICANT: Wand
APPLICANT: Wand
TITLE OF INVENTION: DIAGNOSITIONS AND METHODS FOR THE THERAPY AND
TITLE OF INVENTION: DIAGNOSIS OF LUNG CANCER
FILE REPERENCE: 210121.478C15
CURRENT APPLICATION NUMBER: US/09/736,457
CURRENT FILING DATE: 2000-12-13
NUMBER OF SEQ ID NOS: 1864
SOFTWARE: FastSEQ for Windows Version 3.0
LENGTH: 20
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US-10-786-505-26
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Pred. No. 2e+02;
3; Mismatches 3; Indels
FILE REFERENCE: 15060-58
CURRENT APPLICATION NUMBER: US/10/786,505
CURRENT FILING DATE: 2004-02-25
PRIOR APPLICATION NUMBER: 09/168,623
FRIOR FILING DATE: 2000-07-18
NUMBER OF SEQ ID NOS: 104
SOFTWARE: Patentin Ver. 3.2
SEQ ID NO 26
LENGTH: 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 1855, Application US/09736457
Patent No. US20020168637A1
GENERAL INFORMATION:
APPLICANT: Wang, Tongtong
APPLICANT: Bangur, Chaitanya S.
APPLICANT: Lodes, Michael A.
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Patent No. US20020172952A1
GENERAL INFORMATION:
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53.8%;
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ORGANISM: Artificial Sequence
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Best Local Similarity 53.00
Transport Conservative
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8 ARKKVEEEDEEEE 20
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; ORGANISM: Homo sapiens
US-09-736-457-1855
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APPLICANT:
APPLICANT:
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Vedvick, Thomas S.
Bangur, Chaitanya S.
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Best Local Similarity 53.87
Best Local 7; Conservative
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Darrick
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CRGANISM: Homo sapiens
US-10-283-017-1855
                       Fanger, G
Vedvick,
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APPLICANT: Machael D.
APPLICANT: Actor, Robert A.
APPLICANT: Actor, Michael D.
APPLICANT: Stacth, Paul R.
APPLICANT: Garter, Thomas S.
APPLICANT: Carter, Darrick
APPLICANT: Panger, Gary R.
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY
TITLE OF INVENTION: COMPOSITIONS OF LUNG CANCER
TITLE OF INVENTION: WINGER: 210121.478C19
CURRENT APPLICATION NUMBER: 12012-03-28
NUMBER OF SEQ ID NOS: 2011
SOFTWARE FastSEQ for Windows Version 4.0
SEQ ID NO 1855
               APPLICANT: Vedvick, Thomas S.
APPLICANT: Bangur, Chattanya S.
APPLICANT: Bangur, Chattanya S.
APPLICANT: MCNabb, Andria
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY
TITLE OF INVENTION: AND DIAGNOSIS OF LUNG CANCER
FILE REPRENCE: 210121.478C18
CURRENT APPLICATION NUMBER: US/10/017,754
CURRENT FILING DATE: 2001-10-29
NUMBER OF SEQ ID NOS: 2004
SOFTWARE: FaetSEQ for Windows Version 4.0
SEQ ID NO 1855
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llarity 53.8%; Pred. No. 2e+02;
Conservative 3; Mismatches 3; Indels
                                                                                                                                                                                                                                                                                                                                                      DB 14; Length 20;
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Pred. No. 2e+02;
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Sequence 1855, Application US/10283017
Publication No. US20030211510A1
GENERAL INFORMATION:
APPLICANT: Henderson, Robert A.
APPLICANT: Watanabe, Yoshihiro
APPLICANT: Watanabe, Yoshihiro
APPLICANT: Sleath, Paul R.
APPLICANT: Sleath, Paul R.
APPLICANT: Johnson, Jeffrey C.
APPLICANT: Butham, Margarita
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ## Sequence 1855, Application US/10113872
## Publication No. US20030170255A1
GENERAL INFORMATION:
## APPLICANT: Watenabe, Yoshihiro
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Best Local Similarity 53.8'
Best Local 7, Conservative
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8 ARKKVEEEDEEEE 20
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ORGANISM: Homo sapiens
US-10-017-754-1855
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Best Local Similarity
Matches 7; Conserv
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APPLICANT: Ranger, Gary R.

APPLICANT: Banger, Chalterny S.

APPLICANT: Banger, Chalterny S.

APPLICANT: Banger, Chalterny S.

APPLICANT: Banger, Chalterny S.

TITLE OF INVESTIGN. Chalterny S.

TITLE OF INVESTIGN. Chalterny S.

FILLER REFERENCE. 100.14.76C00

COURSENT PARTICULATION WREBER: UP,10.243.017

COURSENT PARTICULATION WREBER: UP,10.243.017

COURSENT PARTICULATION WREBER: UP,10.243.017

SERVING DATE: 2003-10.24

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Search completed: April
Job time : 138 secs
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CTHER INFORMATION: EXPRESSED IN BONE MARROW, SIGNAL = 0.92
CTHER INFORMATION: EXPRESSED IN HEART, SIGNAL = 1
CTHER INFORMATION: EXPRESSED IN HELA, SIGNAL = 1
US-09-864-761-36284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     33.3%; Score 38; DB 9; Length 22; 61.5%; Pred. No. 2.98+02; tive 2; Mismatches 3; Indele
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PRIOR APPLICATION NUMBER: US 09/608,408
PRIOR FILING DATE: 2000-06-30
PRIOR APPLICATION NUMBER: US 09/774,203
PRIOR FILING DATE: 2001-01-29
NUMBER OF SEQ ID NOS: 49117
SOFTWARE: Annomax Sequence Listing Engine vers. 1.1
SEQ ID NO 32284
LENGTH: 22
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Patent No. US20020172952A1
GENERAL INFORMATION:
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Bangur, Chaitanya S.
Lodes, Michael A.
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KKVEEEDEEQEEEEE 16
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Vedvick, Tom
Carter, Darrick
Retter, Marc
Mannion, Jane
Fan, Liqun
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Best Local Similarity 61.5'
Matches 8; Conservative
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Matches 6; Conservative
                                                                                                                                                                                                                                                                                                                                         TYPE: PRT
ORGANISM: Homo sapiens
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; ORGANISM: Homo sapiens
US-09-736-457-1856
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Sequence 15, Appli
Sequence 15, Appl
Sequence 1855, Ap
Patent No. 5225193
Patent No. 5225193
Sequence 1856, Ap
Patent No. 5225193
Patent No. 5225193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                 2005, 14:50:40 ; Search time 43 Seconds (without alignments) 38.193 Million cell updates/sec
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Copyright (c) 1993 - 2005 Compugen Ltd.
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US-08-127-499A-15
US-08-128-847-15
US-08-554-616-25
US-09-515-965A-1640
US-09-350-841A-1669
US-10-005-305-19
US-08-073-028-24
US-08-554-616-24
US-09-515-965A-1641
US-09-350-841A-1670
US-09-350-841A-1670
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US-09-736-457-1856
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PCT-US95-02885-1
PCT-US95-07542-15
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-08-800-644-11
US-08-649-991-49
US-08-690-011A-4
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1 KLGFFAHKKIPEEEKREEKLEQ 22
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Maximum Match 100%
Listing first 45 summaries
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Gapop 10.0 , Gapext 0.5
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Match Length DB
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Maximum DB seq length: 22
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Sequence Seq		0,
		Length 20; 7; Indels
US-09-299-495F-4 US-08-199-776-21 US-08-63-731-21 US-08-879-38-21 US-09-406-781-15 US-09-181-94-15 US-09-293-2388-21 US-09-880-132-1 US-09-880-132-1 US-09-880-132-1 US-08-63-731-5 US-08-63-731-5 US-08-63-731-5 US-08-63-731-5 US-08-879-338-26 US-08-879-338-26 US-08-879-338-5 US-08-879-338-5 US-08-879-338-5 US-08-879-338-5 US-08-879-338-5 US-08-879-338-5	ALIGNMENTS 8214770 k H. ODS FOR IDENTIFYING BITORS OF INTEGRIN VATION ardson treet ette, 1.44 Mb el SoZ or 555X OS (Version 5.0) (Version 5.1) /08/214,770 0,162 :: 06410/002001 TION: 0770 6	Score 43; DB 1; Pred. No. 14; 2; Mismatches
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APPLICANT: Fan, Liqun
APPLICANT: Fan, Liqun
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY AND
TITLE OF INVENTION: COMPOSITIONS OF LUNG CANCER
FILE REFERENCE: 210121.478C15
CURRENT APPLICATION NUMBER: US/09/736,457
CURRENT FILING DATE: 2000-12-13
NUMBER OF SEQ ID NOS: 1864
SOFTWARE: FastSEQ for Windows Version 3.0
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APPLICATION: BARTPAI, TAMAS
TITLE OF INVENTION: BORDETELLA TOXIN PEPTIDES AND VACCINES
NUMBER OF SEQUENCES: 10
CURRENT APPLICATION DATA:
APPLICATION UNBER: US/07/346,837
FILING DATE: 19-OCT-1987
                                                                                                                                                                                                                                                                                                                                                    Length 20;
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                                                                                                                                                                                                                                                                                                                                                                                              Indels
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37.7%; Score 43; DB 5;
Best Local Similarity 50.0%; Pred. No. 14;
Matches 9; Conservative 2; Mismatches
                                                                                                                                                                              # MOLECULE TYPE: peptide
| HYPOTHETICAL: NO
| FRACMENT TYPE: C-terminal
| ORIGINAL SOURCE:
| ORGANISM: Homo sapiens integrin alpha-IIb
| PCT-US95-07542-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3; Mismatches
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FILING DATE: 13-JUN-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: USSN 08/260,514
FILING DATE: 15-JUN-1994
INFORMATION FOR SEQ ID NO: 15:
SEQUENCE CHARACTERISTICS:
LENGTH: 20 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-736-457-1855
; Sequence 1855, Application US/09736457
; Patent No. 650948
; GENERAL INFORMATION:
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Bangur, Chaitanya S.
Lodes, Michael A.
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Vedvick, Tom
Carter, Darrick
Retter, Marc
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Best Local Similarity 53.0.
Best Local 7; Conservative
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ARKKVEEEDEEEE 20
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US-09-736-457-1855
                                                                                                                                                     TYPE: amino acid TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQ ID NO 1855
LENGTH: 20
TYPE: PRT
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APPLICANT:
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5225193-7
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                                                                                                                                               Sequence 1, Application PC/TUS9502885
GENERAL INFORMATION:
APPLICANT: Ginaberg, Mark H.
APPLICANT: Ginachy
TITLE OF INVENTION: OF INTEGRIN ACTIVATION
NUMBER OF SEQUENCES: 19
CORRESPONDENCE ADDRESS:
ADDRESSE: Fish & Richardson
STREET: 225 Franklin Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE OF INVENTION: STRUCTURAL MODELS FOR CYTOPLASMIC TITLE OF INVENTION: DOMAINS OF TRANSMEMBRANE RECEPTORS NUMBER OF SEQUENCES: 20
COMPUTER READABLE FORM: MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: Patentin Release #1.0, Version #1.25 (EPO)
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                 CITY: Boston
STATE: Massachusetts
COUNTRY: U.S.A.
ZIP: 02110-2804
COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
COMPUTER: IBM PS/2 Model 502 or 553X
OPERATING SYSTEM: MS-DOS (Version 5.0)
SOPTWARE: Wordperfect (Version 5.1)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US95/02885
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION:
PRIOR APPLICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/214,770
FILING DATE: March 14, 1994
ATTORNEY, AGENT INFORMATION:
NAME: Clark, Paul T.
REGISTRATION NUMBER: 06410/002001
TELECHONE (617) 542-5070
TELEPHONE: (617) 542-5070
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: PCT/US95/07542
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    1 KLGFFAHKKIPEEEKREE 18
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Best Local Similarity 50.0
Matches 9; Conservative
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TELEX: 200154
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
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STRANDEDNESS:
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PCT-US95-02885-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE
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Sequence 25, Application US/08073028
; Sequence 25, Application US/08073028
; Patent No. 5464933
; GENERAL INFORMATION:
APPLICANT: Matthews, Thomas J.
APPLICANT: Wild, Carl T.
TITLE OF INVENTION: SYNTHETIC PEPTIDE INHIBITORS OF HIV
TITLE OF INVENTION: TRANSMISSION
NUMBER OF SEQUENCES: 74
CORRESPONDENCE ADDRESS:
ADDRESSE: Pennie & Edmonds
STREET: 1155 Avenue of the Americas
CITY: New York
STATE: New York
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                 5225193-2
;Patent No. 5225193
TTLE OF INVENTION: BORDETELLA TOXIN PEPTIDES AND VACCINES
TITLE OF SEQUENCES: 10
CUMBER OF SEQUENCES: 10
CURRENT APPLICATION DATA:
APPLICATION UNMER: US/07/346,837
FILING DATE: 19-OCT-1987
APPLICANT: BARTFAI, TAMAS
TITLE OF INVENTION: BORDETELLA TOXIN PEPTIDES AND VACCINES
NUMBER OF SEQUENCES: 10
CURREN APPLICATION DATA:
APPLICATION NUMBER: US/07/346,837
FILING DATE: 19-OCT-1987
                                                                                                                                                                                              Score 36; DB 6; Length 20; Pred. No. 1.38+02; 3; Mismatches 4; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     31.6%; Score 36; DB 6; Length 20; 46.2%; Pred. No. 1.38+02; Live 3; Mismatches 4; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER READABLE FORM:
MEDLUM TYPE: Floppy disk
COMPUTER: IBM Compatible
COMPUTER: IBM PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/073,028
FILING DATE: 07-JUN-1993
CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
NAME: Coruzzi, Laura A.
REFERENCE/DOCKET NUMBER: 30,742
REFERENCE/DOCKET NUMBER: 7872-004-999
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4 FFAHKKIPEEEKR 16
                                                                                                                                                                                                                                                                              4 FFAHKKIPEEEKR 16
                                                                                                                                                                                                                                                                                                   3 YLAHRRIPPENIR 15
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3 YLAHRRIPPENIR 15
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Best Local Similarity
Matches 6; Conserv
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Best Local Similarity
Matches 6; Conserv
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                                                                                                                    SEQ ID NO:2:
; LENGTH: 20
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LENGTH: 20
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APPLICANT: Fan, Liqun
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY AND
TITLE OF INVENTION: DIAGNOSIS OF LUNG CANCER
FILE REFERENCE: 210121.478C15
CURRENT APPLICATION NUMBER: US/09/736,457
CURRENT APPLICATION NUMBER: US/09/736,457
CURRENT APPLICATION NUMBER: US/09/736,457
SUFFMER: PASTSO ID NOS: 1864
SOFTWARE: FastSEQ for Windows Version 3.0
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                                                                                                                                                                                                                                                      PATENT NO. 5225193
PAPPLICANT: BARTFAI, TAWAS
TITLE OF INVENTION: BORDETELLA TOXIN PEPTIDES AND VACCINES
NUMBER OF SEQUENCES: 10
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/346,837
FILING DATE: 19-OCT-1987
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 39; DB 6; Length 20;
Pred. No. 51;
5; Mismatches 8; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 4; Length 20;
95;
                                           DB 6; Length 20;
                                                                                  8; Indels
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                                      ; Score 39; DB 6; Pred. No. 51; 5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 37; DB 4
Pred. No. 95;
6; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; Sequence 1856, Application US/09736457; Patent No. 6509448; GENERAL INFORMATION:
                                                                                                                    1 KLGFFAHKKIPEEEKREEKL 20
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1 KSEYLAHRRIPPENIRRTRV 20
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Bangur, Chaitanya S.
Lodes, Michael A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         32.5%;
                                      Query Match
Best Local Similarity 35.0%;
Matches 7; Conservative
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Best Local Similarity 35.0%;
Matches 7; Conservative
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KKVEEEDEEQEEEEE 16
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Vedvick, Tom
Carter, Darrick
Retter, Marc
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Best Local Similarity
Matches 6; Conserva
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;Patent No. 5225193
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LENGTH: 20
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LENGTH: 20
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APPLICANT:
APPLICANT:
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APPLICANT:
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CITY: Washington STATE: D.C.
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STRANDEDNESS:
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Best Local Similarity
Matches 7; Conserv
                                                                                                                                                                                                                                        D.C.
: USA
    ; Patent No. 5556757
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| Satent No. 5510264
| Carrent No. 5510264
| GENERAL INFORMATION |
| APPLICANT: SHARMA, Lawrence Rajendra |
| TITLE OF INVENTION: ANTIBODIES WHICH BIND MENINGITIS RELATED |
| TITLE OF INVENTION: HOMOLOGOUS ANTIGENIC SEQUENCES |
| NUMBER OF SEQUENCES: O CORRESPONDENCE ADDRESS: ADDRESSER: FOLEY & Lardher |
| STREET: 3000 K Street, N.W., Suite 500 |
| CITY: Washington |
| STRIET: D.C.
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31.6%; Score 36; DB 1; Length 21;
Best Local Similarity 43.8%; Pred. No. 1.4e+02;
Matches 7; Conservative 3; Mismatches 6; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COUNTRY: USA

ZIP: 20007-5109

ZIP: 20007-5109

COMPUTER READABLE FORM:
MEDIUM TYPE: Flogby disk
COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PAtentin Release #1.0, Version #1.30

CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/127,499A

FILING DATE: 28-5EP-1993

ATTORNEY/AGENT INFORMATION:
NAME: BENT, Stephen A.
REFERENCE/DOCKET NUMBER: 29,768

REFERENCE/DOCKET NUMBER: 29,768

TELECOMMUNICATION NUMBER: 51916/102/INBI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      . 1.4e+02;
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43.8%; Pred. No. 1.4e+02
tive 3; Mismatches
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                TELEFAX: (212) 869-8864/9741
TELEX: 66141 PENNIE
INFORMATION FOR SEQ ID NO: 25:
SEQUENCE CHARACTERISTICS:
LENGTH: 21 aming acids
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(212) 790-9090
                                                                                                                                                                                                                                                                                               7 HKKIPEEEKREEKLEQ 22
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(202) 672-5399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEX: 904136
INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
LENGTH: 21 amino acids
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Best Local Similarity 43.0-
Best Local 7; Conservative
                                                                                                                                                   MOLECULE TYPE: peptide US-08-073-028-25
                                                                                                                     TYPE: amino acid
TOPOLOGY: unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              unknown
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US-08-127-499A-15
  TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                            RESULT 11
US-08-127-499A-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 12
US-08-482-847-15
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PEPTIDES RÉPRESENTING EPITOPIC SITES FOR BACTERIAL AND VIRAL MENINGITIS CAUSING AGENTS AND THEIR CNS CARRIER, ANTIBODIES THERETO, AND USES THEREOF
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Bolognesi, Dani P.
APPLICANT: Matthews, Thomas J.
APPLICANT: Wild, Carl T.
TITLE OF INVENTION: TRANSMISSION
NUMBER OF SEQUENCES: 74
ADDRESSEE: Pennie & Edmonds
                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER: REALBLE FORDER COMPATION:
COMPUTER: The PC compatible
COMPUTER: The PC compatible
COMPUTER: The PC compatible
COMPATION SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/482,847
FILING DATE: 07-UM-1995
CLASSIFICATION 514
PRIOR APPLICATION THAS:
APPLICATION NUMBER: US/08/127,499
FILING DATE: 28-SEP-1993
ATTONENTYAGENT INFORMATION:
NAME: BENT, Stephen A.
REGISCRATION NUMBER: 29,768
RESTRENCE/DOCKET NUMBER: 51916/104/INBI
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELEPRAKE (202) 672-5399
GENERAL INFORMATION:
APPLICANT: VAN ALSTYNE, Diane
APPLICANT: SHARMA, LAWTENCE Rajendra
APPLICANT: SHARMA, LAWTENCE Rajendra
TITLE OF INVENTION: BACTERIAL AND VIRAL MEN
TITLE OF INVENTION: CNS CARRIER, ANTIBODIES
NUMBER OF SEQUENCES: 40
CORRESPONDENCE ADDRESS: ADDRESSEE: FOLEY & Lardner
STREET: 3000 K Elreet, N.W., Suite 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STREET: 1155 Avenue of the Americas CITY: New York STATE: New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 25, Application US/08554616; Patent No. 6133418; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COUNTRY: USA
ZIP: 10036
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | | | : ::|| ||
1 HSLIEESQNQQEKNEQ 16
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INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LENGTH: 21 amino acids
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                                                                                                                                                                                                                                                                                                                                   ZIP: 20007-5109
COMPUTER READABLE FORM:
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Search completed: April 6, 2005, 15:00:24
Job time : 44 secs
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GENERAL INFORMATION:

APPLICANT: Antczak, J.

APPLICANT: Antczak, J.

APPLICANT: Belmedico, M.

APPLICANT: Belmedico, M.

APPLICANT: Lambert, D.

APPLICANT: Lambert, D.

APPLICANT: Sista, P.

ITILE OF INVENTION: METHODS AND COMPOSITIONS FOR INHIBITION OF MEMBRANE FUSION-

ITILE OF INVENTION: MOWBER: US/09/515,965A

CURRENT FILING DATE: 1999-06-20

PRIOR APPLICATION NUMBER: 09/315,304

PRIOR PILING DATE: 1999-06-20

PRIOR APPLICATION NUMBER: 09/082,279

PRIOR PILING DATE: 1999-06-20

NUMBER OF SEC ID NOS: 1994

SOFTWARE: FastSEQ for Windows Version 3.0

SEQ ID NO 1640

LENGTH: 21
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       31.6%; Score 36; DB 3; Length 21; 43.8%; Pred. No. 1.46+02; tive 3; Mismatches 6; Indels
                                       PatentIn Release #1.0, Version #1.25
                                                CURRENT APPLICATION DATA:

APPLICATION NUMBER:

CLIASSIFICATION 1435

FILING DATE:

CLASSIFICATION A435

FRICR APPLICATION DATA:

APPLICATION NUMBER: US 08/073,028

FILING DATE:

ATTORNEY AGENT INFORMATION:

NAME: Coruzzi, Laura A.

REFERENCE/DOCKET NUMBER: 7872-004-999

TELEPHONE: (212) 869-8864/9741

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TELEFAX: 66141 PENNIE

INFORMATION POR SEQ ID NO: 25:

**SOUTHER OF THE 
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; OTHER INFORMATION: Core polypeptide US-09-515-965A-1640
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: PRT
ORGANISM: Artificial Sequence
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HSLIEESQNQQEKNEQ 21
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Best Local Similarity 43.83
Matches 7; Conservative
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MOLECULE TYPE: peptide
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US-09-515-965A-1640
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Sequence 1669, Application US/09350841A

Sequence 1669, Application US/09350841A

Parent No. 6750008

GENERAL INFORMATION:
APPLICANT: Jeffs, Peter;
APPLICANT: OF INVENTION: METHODS AND COMPOSITIONS FOR INHIBITION OF MEMBRANE
TITLE OF INVENTION: PUSION-ASSOCIATED EVENTS, INCLUDING HIV TRANSMISSION
FILE REPRESENCE: 7872-066-999
CURRENT APPLICATION NUMBER: US/09/350,841A
CURRENT APPLICATION NUMBER: 1999-07-09
NUMBER OF SEQ ID NOS: 1946
SOFTWARE: PATENTING DATE: 1999-07-09
SOFTWARE: PATENTING US. 2.1
LENGTH: 21
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Best Local Similarity 43.8%; Pred. No. 1.4e+02;
Matches 7; Conservative 3; Mismatches 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                               ), OTHER INFORMATION: core polypeptide US-09-350-841A-1669
                                                                                                                                                                                                                                                                                                                                                                                    TYPE: PRT
ORGANISM: Artificial Sequence
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